NOVEMBER
1956

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2208.1 Kc.	5722.222 Kc.	7025 Kc.	7100 Kc.	8155.714 Kc.
3382.5 Kc.	5744.444 Kc.	7028 Kc.	7106.7 Kc.	8161.538 Kc.
3500 Kc.	5750 Kc.	7032 Kc.	7110 Kc.	8171.25 Kc.
3535 Kc.	5892.5 Kc.	7032.6 Kc.	7120 Kc.	8176.923 Kc.
4096.6 Kc.	6450 Kc.	7035 Kc.	7121 Kc.	8182.5 Kc.
4285 Kc.	6850 Kc.	7040 Kc.	7125 Kc.	8183.5 Kc.
4495 Kc.	7004 Kc.	7042.65 Kc.	7126 Kc.	8317.2 Kc.
4535 Kc.	7005 Kc.	7045 Kc.	7130 Kc.	8320 Kc.
4540 Kc.	7010 Kc.	7047 Kc.	7134 Kc.	10.511 Mc.
5000 Kc.	7010.7 Kc.	7050 Kc.	7140 Kc.	10.515 Mc.
5050 Kc.	7011.5 Kc.	7053.5 Kc.	7145 Kc.	10.524 Mc.
5300 Kc.	7011.75 Kc.	7063 Kc.	7150 Kc.	10.530 Mc.
5360 Kc.	7012 Kc.	7064 Kc.	7156 Kc.	10.5465 Mc.
5456 Kc.	7016 Kc.	7068 Kc.	7162.5 Kc.	10.556 Mc.
5530 Kc.	7018 Kc.	7072 Kc.	7174 Kc.	12.803 Mc.
5633.333 Kc.	7021 Kc.	7073.5 Kc.	7175 Kc.	12.915 Mc.

NOVEMBER — — — 1956
Vol. 24 No. 11

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," C.O.R. House, 191 Queen Street, Melbourne, C.1, on or before the 8th of each month.

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WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 56 and 144 Mc. No frequency checks available from VK2WL Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc., 57.6 and 146.25 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 3560 and 14342 Kc. 3560 Kc. channel is used from 0915 hours to 1015 hours each Sunday for the W.I.A. Country hook-up. No frequency checks available.

VK5WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK5MD and VK5WI by arrangements on all bands to 56 Mc.

VK6WI: Sundays, 0930 hours WAST, on 7145 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 3672 Kc. No frequency checks are available.

VK9WI: Sundays, 1000 hours EST, simultaneously on 3.5, 7, 14 and 144 Mc. Individual frequency checks of Amateur Stations given when VK9WI is on the air.

AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

Published by the Wireless Institute of Australia,
C.O.R. House, 191 Queen Street,
Melbourne, C.1.

EDITORIAL

★

PIRACY

We are told that in the bad old days pirates advertised their presence by using a flag embossed with the skull and crossed bones.

Today in the field of Amateur Radio we have pirates who advertise their presence by using bad language, poor operating procedure and discussing questionable subjects.

Unfortunately, some of these traits are not restricted to "pirates," but apply to some licenced Amateurs who think that h.f. and v.h.f. phone is audible only to the person with whom they are in contact.

Stupid practices such as these do a lot of harm to Amateur Radio and all sane thinking Amateurs should co-operate to stamp out such behaviour by pouncing on all transgressors.

Thanks to our higher standards of education we have senior schoolboys with sufficient technical knowledge to construct and operate illicit transmitters for over-the-fence communications in more ways than one. These lads do not appreciate the range of even the smallest transmitter and would be no doubt surprised to hear recordings made of the questionable story they told some schoolmate over their illicit Radio link.

To overcome this menace it appears essential to include in today's schooling curriculum some form of instruction which will impress lads with the dangers and repercussions of such behaviour.

The Institute desires to encourage every intelligent youth to take an active interest in Amateur Radio. For two reasons: One—a very selfish one—that of increasing membership of the Institute. The other—the most important reason—that of ensuring a continuity in supply of trained communications operators and technicians to meet any national emergency.

It behoves every member of the Institute to not only take under his wing and encourage the young enthusiast, but also to inculcate in his protege a respect for the Radio Regulations and the rules of society, as well as good sound technical training and operating procedure.

The Institute, like Nelson, expects every man to do his duty by obtaining the necessary licence and observing good operating procedure, thus preserving the prestige of the Amateur Fraternity.

The behaviour of operators of Official Institute Stations must, at all times, be beyond reproach. Upon them rests the prestige of the Institute.

—FEDERAL EXECUTIVE.

THE CONTENTS

ZEPHYR MICROPHONES

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A high quality Moving Coil Microphone of striking appearance and fidelity.

- **Ideal for transmission of voice or music.**
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V.H.F. Field Strength Indicator Receiver

FOR T.V. AND T.V.I. FIELD WORK OR V.H.F. TESTS

BY H. F. RUCKERT,* VK2AOU

THE here described v.h.f. receiver was built for the field work of the Sydney W.I.A. T.V.I. Committee. The fundamental idea of the r.f. part of the circuit was adopted from a paper in DL-"QTC," but DL6EG used a v.h.f. twin triode and did not mention the values of the components. Therefore a bit of developmental work had to be carried out around the components the writer could find in his junk box until satisfactory results were achieved.

Any modern v.h.f. twin triode or single triodes of the high mu type may be used. A 6AG5 was not as good an oscillator at 200 Mc. as the 6AK5. The tubes of the r.f. part must not be identical because they operate under different conditions anyhow. The first stage is a grounded grid preamplifier which has little gain, but the main purpose is to make the receiver calibration independent from the aerial and to prevent any radiation by the oscillator. The tuning of the oscillator is quite sharp and a t.v. turret without an air capacitor would only give a spot frequency of 100 Kc. bandwidth per channel, which is not satisfactory for our tests, because we would like to cover the band 30 to 220 Mc., or at least all or most t.v. channels and the harmonics of Amateur band frequencies between these channels. If we cannot get a Mallory spiral inductive tuner, we have to find a small (capacity and dimensions) air capacitor of 2-10 pF. or so. A ceramic Oak switch can be used.

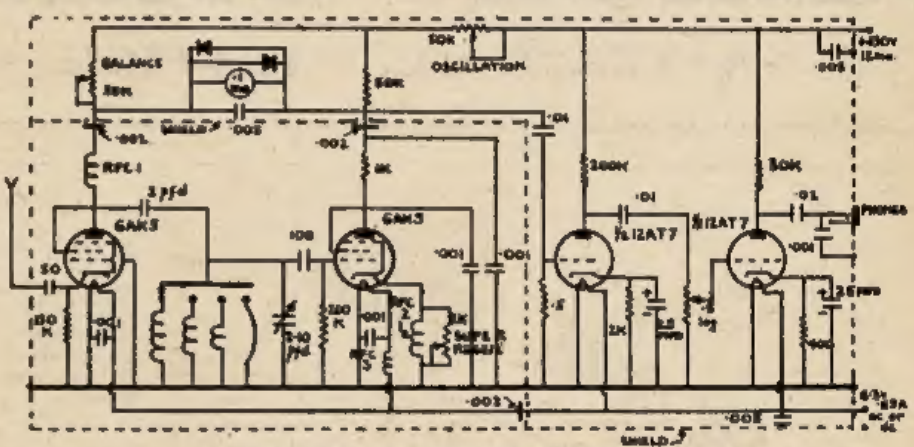
The wiring of the tuned circuit should be started with the highest frequency around 220 Mc. to see if the components have been placed close enough together so that the wiring is short enough to get up to 220 Mc. Remember that the contacts and springs of the switch and the contact spring and solder connection of the air capacitor are alone about 50 per cent. of the length of the leads which form the 220 Mc. inductor. We may reduce the effective inductance of leads by using ¼" copper strips cut from foil.

The oscillator uses a Colpitts type of e.c.o. dividing the r.f. for the feed back with the grid to cathode and cathode to ground valve capacitance. The plates (and screen grids) are free of r.f. The chokes are wound with fine insulated wire of 5 feet length on a 2w. type of resistor (carbon) of any high value, to have a convenient former with leads. The 2,000 ohms cathode resistor may have any value from 300-10,000 ohms to regulate the feed back amount with the highest B+ value at the highest frequency, to get maximum sensitivity.

If the oscillator has too much feed back at lower channels, a lower B+ voltage can be used, with the oscillation variable resistor. The other important point is the superregeneration frequency which is determined by the oscillator grid leak resistor and the grid coupling capacitor. In the interest of high sensitvity the coupling capacitor may not be chosen much smaller than 100 pF. but the grid leak resistor had to be below 1 megohm to get the superregenerative tone up in the supersonic range (above 20 Kc.).

This part of the receiver is in a shielded box and with the exception of the antenna terminal, only filtered leads come out with ceramic button-type feed-through capacitors soldered in the holes of the chassis.

The 0.1 Ma. meter is connected in a bridge circuit between the plates of the two r.f. stages. An instrument rectifier may be connected across the meter as shown, if one is afraid that occasional overloading of the meter may damage it. A 50,000 ohm balancing resistor is used to bring the meter to zero when the oscillator plate current is changing when we tune the receiver over a wide range or change the band.



V.h.f. Field Strength Indicator Receiver

RFC1, 2, and 3—See text.
Inductances selected to cover 45-220 Mc. in six ranges.

A further twin triode is very helpful as audio amplifier to identify the received signal (station or interference, or t.v.i.-causing Ham call). This method is much easier than learning to interpret the cross hatching or the scrambled t.v. pictures caused by various sources of interference. There is not much to say about the audio amplifier. No transformer was used to reduce weight. With the exception of the two small electrolytics, all capacitors are Australian made ceramic capacitors (discs).

V.h.f. Amateurs will not have any trouble to get this modern version of a superregenerative receiver going. There is no doubt that the type described in the A.R.R.L. Handbook is just as good, but the band switching is extremely simple in this Colpitts e.c.o. way.

The sensitivity is good enough for our job. With a 3 ft. aluminium rod standing on the ground floor, 11 miles away from the Sydney 92.1 Mc. f.m. station without a line of direct sight, this station gives a 0.01 Ma. deflection on the meter and clear reception is gained when tuning to the side of the carrier (f.m. with a.m. receiver). The t.v. transmitter will be much stronger.

The taxi stations are as well received (that is their harmonics too, hi!).

IS your Transmitter OK for TV?

Set this receiver up where you may later have the t.v. set. Try your transmitter on all bands you are using. Look for harmonics near or within the t.v. channels. Note the meter deflection these harmonics are causing. Compare these signals with the field strength of your f.m. v.h.f. station in the 90 Mc. range (see W.I.A. Call Book for frequencies and power). If your transmitter has no stronger harmonics running full power and 100 per cent. modulation, using a clock as audio source, on the operating aerial, than the signal of the f.m. station puts a field strength in at the same location, assuming the t.v. station will be located at the same place or received over a similar distance, you have a good chance not to get t.v.i. due to a fault in your transmitter.

There is little doubt that you will overload the front stages of your own and your neighbour's t.v. sets with the fundamental (your licensed transmission). You should co-operate to identify the trouble with this v.h.f. receiver, but don't touch the neighbour's t.v. set. It is the responsibility of the service contractor to report to the manufacturer that the t.v. set in question does not have the required selectivity to be able to sort the t.v. signal from other licensed signals out (your harmonics would not be licensed and are often not on Amateur bands).

Use the instructions published in the Phil Rand T.V.I. Book, the A.R.R.L.

(Continued on Page 7)

*25 Berrille Road, Beverly Hills, N.S.W.

PULSE THEORY

PART THREE

BY I. F. BERWICK,* VK3ALZ

MULTIVIBRATORS FOR PRODUCTION OF SAWTOOTH WAVES

Sawtooth waves can be produced by connecting a condenser from one plate of a multivibrator to ground (Fig. 11a).

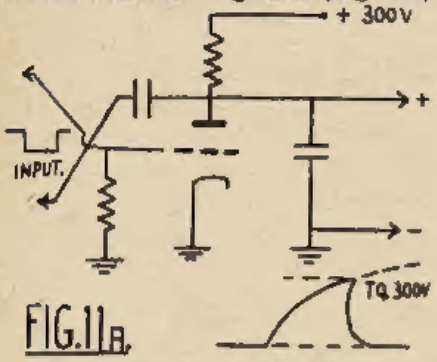


FIG.11a.

At time t1 (Fig. 11b) tube is at cut off and condenser C charges through the load resistor R towards 300 volts. At time t2 tube again conducts and quickly discharges the condenser to its original low value. The value of R and C determine the slope of the sawtooth. By making C small and R larger than the resistance of the tube, and also if only the lower portion of the exponential curve is used, a nearly linear sawtooth wave results (Fig. 11b).

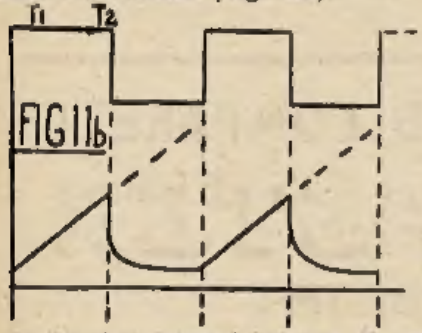


FIG 11b

If the time interval between t1 and t2 is short enough to allow the charge on the condenser to rise to only a small fraction of the supply voltage, then only a small portion of the exponential curve is used and is therefore approximately linear.

TO OVERCOME FIRST ORDER CURVATURE

It was explained earlier that the exponential charging curve has first order curvature. To obtain a linear voltage rise from condenser charging it is necessary to eliminate first order curvature.

Use of Saturated Valves to Overcome First Order Curvature

Saturated Diode (Fig. 12a): With low voltage applied to it a diode has high resistance, this resistance decreasing towards the point of saturation. When the charge on C is low, current through the diode is maximum and the diode will be saturated and consequently its resistance will be low and the condenser will charge.

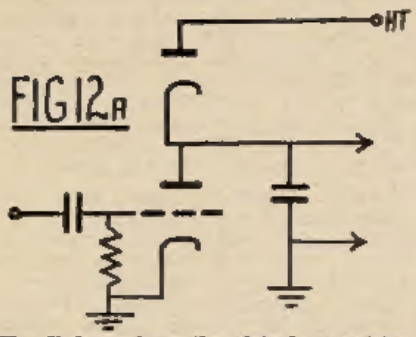


FIG12a

The diode replaces the plate load resistor.

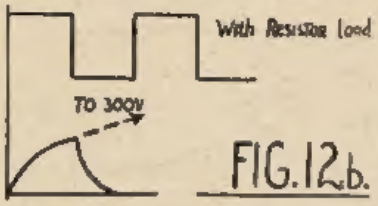


FIG.12b.

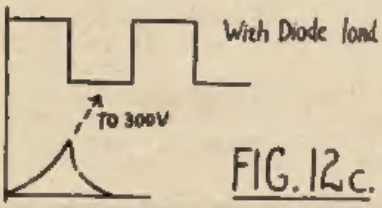


FIG. 12c.

It will therefore be seen that the diode acts as a variable voltage source, causing the voltage to increase as the point of operation moves up the sawtooth, thus reducing first order curvature.

Saturated Triode (Fig. 12d): When the charge on C is low, more current is drawn through V1. This current flows through R increasing the bias on V1. As the current decreases the bias on V1 is reduced. Thus the tube acts as a high resistance when charging is first commencing and thus slows down the initial charging rate, whilst as the condenser charges up the tube becomes a lower resistance and tends to increase the charging rate, thus counteracting first order curvature.

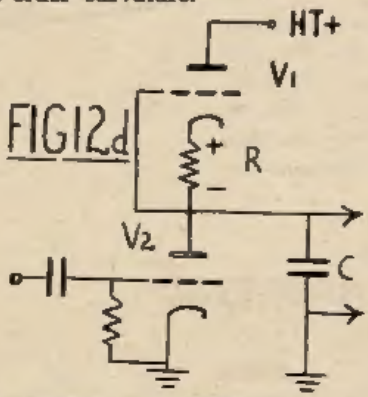


FIG12d

To produce a perfectly linear charging curve V1 must have infinite gain. The use of a pentode would improve linearity.

THE BOOT-STRAP OSCILLATOR

(Cathode Feedback)

This circuit (Fig. 13) is used to produce a moderately linear sawtooth wave.

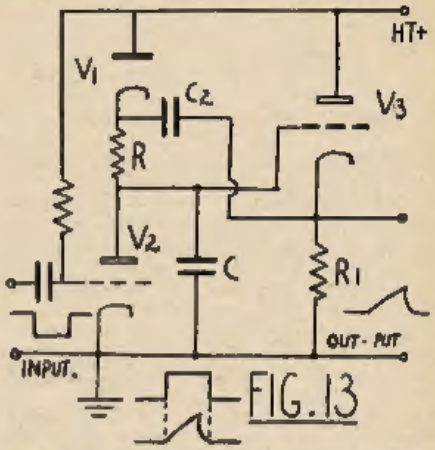


FIG.13

R is the charging resistor for C and also the grid resistor of the cathode follower V3. The grid of V2 is generally held at a potential slightly above earth, therefore there is no voltage across C. A negative gate pulse applied to the grid of V2 cuts this tube off and the voltage across C begins to rise exponentially to the h.t. voltage. When C begins its charge the current flows into it through the diode and R will tend to be heavier than when C is nearly fully charged. The sawtooth wave applied to the cathode follower grid is transferred to the cathode load resistor R1 which is coupled to the +ve side of R so that the voltage across R is kept nearly constant. Therefore the current flowing into C is nearly constant and the voltage rise across C nearly linear. When the gate closes, C is shorted by the low resistance of V2 and thus C discharges ready for the next cycle.

THE MILLER SWEEP GENERATOR

Introductory note. The formula for Miller Effect of a valve is—

Input capacitance Cin = Cpg (1 + A)

where Cpg is the plate to grid capacitance of the tube, and A is the amplification factor. Since A is dependent on the operating conditions, Cin is also dependent on these conditions.

This fact is utilised in the Miller sweep tube.

Referring to the circuit (Fig. 14a) it will be seen that Cpg is in parallel with C, the grid coupling condenser. But Cpg is multiplied by a factor 1 + A, i.e. C is paralleled by a condenser Cpg (1 + A). Now during the course of operation of the sweep cycle, C is charged exponentially through R, therefore Cpg (1 + A) is also charged exponentially through R. This causes Eg (the grid bias) to vary and thus the value of A to change and hence the condenser Cpg (1 + A) to change.

The effect of this is to counteract first order curvature so that Eg rises linearly instead of exponentially.

* Lot 35, Loongana Avenue, Glenroy.

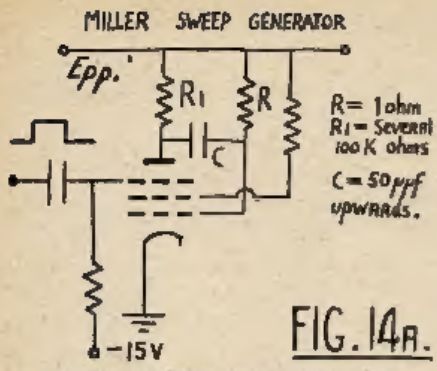


FIG. 14A.

Circuit of Miller Sweep Generator

Initially the grid is at ground due to voltage drop across R equalling h.t. and the suppressor at, say, —15v. (sufficient to cut off plate current), therefore the plate is at + Epp volts and all the cathode current is going to the screen which may be at perhaps 60v. When a +ve gate is applied to the suppressor and is sufficient to raise it to about +5 volts, current flows to the plate and plate voltage falls. Since the plate is coupled to the grid by C, the plate voltage drops only a few volts (about 5) before the grid voltage is reduced and the plate current is reduced to just the few hundred microamps. that the plate load will permit. At the end of this initial step therefore the total cathode current has been greatly reduced, the screen current has been so greatly reduced that a large +ve voltage appears at the screen and a small plate current is flowing.

The drop in grid voltage would tend to make the anode volts rise, but the negative voltage on the grid (i.e. the charge on C) is reduced by exponential charging through R. This rise in grid voltage makes the anode voltage fall still further, thus opposing the discharge of C through R. The effect is to cause the plate voltage to fall linearly until a state of equilibrium is reached. At this point the plate current bottoms against the "knee" of the plate curve. At this point the space current is transferred from the plate to the screen.

This state of equilibrium is stable for the duration of the +ve gate on the suppressor grid. When this is removed the plate rises towards Epp with a speed limited mainly by R C. The departure from linearity in the run-down of the plate during the Miller portion of the operation is less than 0.1% (Fig. 14b).

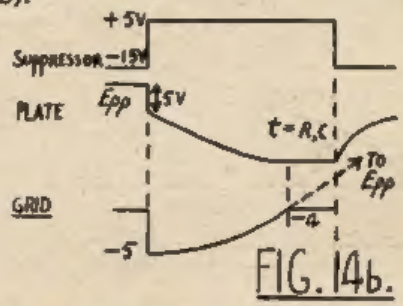


FIG. 14b.

This type of circuit can also be arranged as a flip-flop, giving in addition to the linear sawtooth a gate of very precise and accurately controlled length which is often used for ranging purposes for producing jitter free delay circuits in which form it is known as the phantastron.

The **Phantastron** (Fig. 15) is a triggered self-gating sweep generator.

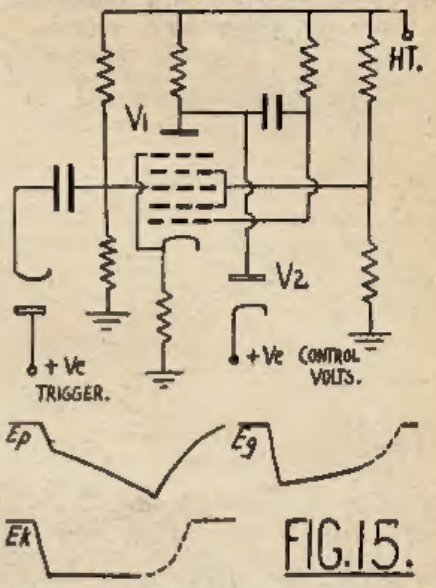


FIG. 15.

Before the trigger pulse is applied the control grid allows a reasonably heavy screen current to flow, but plate current is limited to cut off due to the voltage drop across Rk producing a negative bias on the injector grid which is returned to ground. The circuit is at this stage in a state of equilibrium.

The application of a +ve trigger pulse to the injector grid immediately causes plate current to flow, resulting in a voltage drop at the plate which is coupled as a negative voltage through C to the control grid, thus limiting screen current and hence reducing the voltage drop across Rk with resultant reduction in the bias on the injector grid.

The tube is now open and tends to settle down in a new stable state. The drop in voltage at the plate, coupled to the grid, would also tend to limit plate current so that it is a small drop equal to the drop on the grid and is stabilised by it.

The control grid will now commence to go less negative as condenser C charges through Rg. Note that the control grid has only to go a few volts +ve in order to return the circuit to the original stable state and the condenser is charging towards a comparatively high voltage. This in itself provides good linearity.

As the control grid goes positive so more plate current will flow, resulting in a lowering plate voltage which tends to cause more linear charging of the condenser C. This transferred to the grid results in a more linear fall of the voltage at the plate. Linearity is thus self-adjusting and of a very high order.

Eventually plate voltage falls to a point where amplification of the valve approaches unity. The grid voltage has risen to a point where increasing screen current is possible. The flop action then occurs. Voltage drop across Rk starts to increase which biases the injector grid, thus limiting plate current. The consequent increase in plate volts is coupled to the grid, increasing screen current and injector bias. The action is cumulative and the circuit quickly returns to the original stable state. The plate current being cut off, the plate volts rise exponentially as C charges through RL.

It can be shown that the duration of the unstable condition, say the length of the gate at the cathode, is directly proportional to the plate voltage at the start. The slop of plate voltage decrease is purely a function of C and Rg.

The voltage to which Ep falls will be the same for any starting voltage, therefore from the diagram it will be seen that the pulse duration will be directly proportional to plate control voltage. Therefore by clamping the plate voltage, diode clamp V2, to some predetermined voltage a gate of a precise length can be produced across the cathode load Rk.

The circuit may be triggered by a —ve trigger pulse to the control grid or a similar pulse to the plate.

In order to obtain better linearity the amplification is frequently increased by increasing the value of the cathode resistor R1 and returning it to a negative voltage. This circuit is an example of a gated sweep generator. Note that the duration of the cycle is dependent on the duration of the gating pulse.

PULSE CIRCUITS USING INDUCTANCES

Ringing Circuit (Fig. 16a): The valve is normally conducting and a steady plate current flows through the valve and inductance. If a large negative gate pulse is applied to the grid sufficient to cut off plate current, the resonant tank is shocked into oscillation. At the end of the gate pulse the tube again conducts and a second oscillation is started. However, the conducting tube is equivalent to a damping resistance across the tank and oscillations die away quickly.

The number of oscillations in each train depends on the Q of the tank circuit.

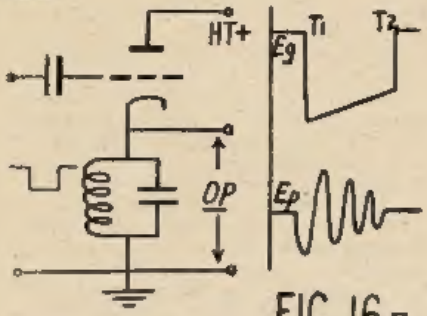


FIG. 16A

The RLC Peaker (Fig. 16b): This circuit is very similar to the ringing circuit, the main differences are: (1) C is restricted to stray capacity; (2) A resistance is connected across L to provide nearly critical damping so that a single sharp peak is developed across L at the beginning of the gate and another at the end of the gate. The negative peak developed at the end is smaller due to the additional damping of the tube.

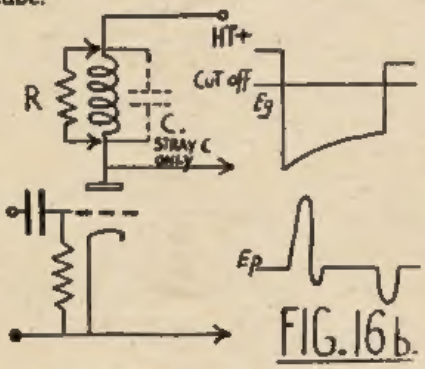


FIG. 16b.

The amplitude of the input pulse must be considerably greater than the cut-off because the voltage needed for cut-off is increased during the time the positive pulse is at the plate of the tube.

It will be seen that the pulses developed in the plate circuit are of high peak amplitude. These voltages may be rectified to provide a source of e.h.t. This is common practice in t.v. receivers.

It is also common practice to apply a sawtooth voltage to a ringing circuit and utilise the high peak voltage developed during flyback for a source of e.h.t.

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V.H.F. INDICATOR RECEIVER

(Continued from Page 3)

T.V.I. Committee Guide (available from the A.R.R.L. free), read "A.R." Oct. '56, "Understanding Television Interference." The manufacturer should complete the t.v. set by supplying the high-pass filter or wave trap free of charge to the serviceman.

The calibration is done before the h.f. part is shielded with a calibrated absorption type wavemeter ("A.R.," Mar., '56, p. 11 and p. 12) to get, at this stage, the coils near enough to right. The correct calibration is carried out after the receiver is shielded and the antenna is connected.

Use a calibrated grid dip meter which may be corrected with the beat notes heard from the g.d.m. in the BC221 frequency meter. Start with the g.d. meter at 50 Mc. or 30 Mc., checked with the Bendix 221 at 2.5 and 3 Mc. respectively. Follow then with 10 Mc. points in the same way and with 2.5 Mc. points finally. Make curves for each range and from these a calibration table in 1 Mc. steps. Mark t.v. channels and 14 and 21 Mc. harmonics.

The v.h.f. receiver is small enough to be used portable or mobile. With a small power supply, the receiver may be used at a t.v.i. complainant's place.

THE TESLA OSCILLATOR*

A HIGH STABILITY CIRCUIT WITH LOW HARMONIC OUTPUT

BY DAVID DEACON, G3BCM

AS the origin and theory of the Tesla oscillator circuit, now gaining popularity in Amateur as well as commercial circles, is not widely known, a few details together with typical values for Amateur operation may be of general interest.

The oscillator was developed by Tesla, a Czechoslovakian State organisation, from a circuit and a theoretical treatise attributed to J. Vackar. Its overriding features are its stability and **low harmonic content**, coupled with the fact that its output is claimed to be inherently more constant over a wider band than is practicable with comparable oscillators.

Long-term stability in a production unit achieves a figure of ± 0.002 per cent., whilst in home-made euipment a figure of ± 0.01 per cent. is readily attainable without extra precautions; a higher short-term stability of ± 0.001 per cent. is considered feasible.

FACTORS AFFECTING STABILITY

The methods of achieving this stability are summarised by Tesla as follows:—

(1) The tuned circuit must be mechanically and electrically stable and have the highest possible Q factor.

(2) The impedance to earth between the grid and anode of the valve and either end of the tuned circuit should be as low as possible, but sufficient to permit sustained oscillations.

(3) The valve should have the highest possible ratio of mutual conductance to the possible changes in its own capacity.

(4) The oscillator power level should be kept as low as practicable.

The Tesla combines the more desirable elements and properties of several circuits, including the Clapp and the Sailor, from which it has been possible to achieve maximum stability together with constant oscillation amplitude over a broad tuning range of 1 : 1.5 or more.

It is perhaps worth noting here that in the Clapp oscillator the mutual conductance of the valve should change proportionally to the third power of the frequency tuned, hence this type of oscillator is inclined to stop oscillating at the high frequency end of its tuning range and be over-driven at the low frequency end, for a tuning range of 1 : 1.3. At the same time, stability is much reduced at the extreme ends of the band covered.

The effects of harmonics in a tunable oscillator have been analysed by Tesla. This analysis shows that there appears in the anode current an abnormal fundamental frequency component, shifted in phase by 90 degrees to the normal anode current and grid driving voltage.

* Reprinted from R.S.G.B. "Bulletin", March, 1956.

• The Tesla Oscillator has aroused considerable interest in recent years, but so far very little authentic information on its performance and construction has been published. The author of this article has had access to a technical paper submitted by the Tesla organisation to the C.C.I.R. (International Radio Consultative Committee). In addition, he has had considerable experience of the practical use of the circuit which is a feature of the transmitter section of the miniature Amateur station with which he won the 1955 Amateur Constructors' Award at the R.S.G.B. Amateur Radio Exhibition.

This is caused by the monolinear behaviour of the valve, aided by its complex internal resistance and mutual conductance. Elimination of these effects can be achieved by the use of feedback circuits derived from the original Colpitts oscillator, thereby forming an effective low pass filter which attenuates the higher harmonics. The LC ratio is not a contributory factor to the attenuation of the higher harmonics in the Tesla circuit.

Stability can be improved by the use of voltage regulation to keep the amplitude of the oscillations constant so that the changes in the working conditions of the valve can be minimised, and the influence of non-linearity held to a fixed value. Commercially produced oscillators use dust cores, which are moved by a micrometric screw for tuning purposes.

On a typical production model covering 2.5 to 27.0 Mc., in six bands, figures for stability are quoted as follows:—

(1) A 10 per cent. change in all feed voltages causes a frequency change of 0.0005 per cent.

(2) A 20 degree change of ambient temperature causes a frequency change of 0.0014 per cent.

(3) A change of valve (mean square of 20 samples) causes a frequency change of 0.0015 per cent.

The oscillator may be equipped with a reactance modulator for narrow band f.m. (telegraphy or telephony).

THE CIRCUIT

The basic circuit is shown in Fig. 1 together with that adapted by the writer for use in Amateur transmitters. For Amateur purposes the oscillator can be constructed to operate on the fundamental frequency of all the h.f. bands. The greatest ratio of minimum to maximum tunable frequency occurs on the Top Band, where it is 1 : 1.11 (28 to 30 Mc., for comparison, is 1 : 1.07). This is well inside the ratio which assures maximum stability together with constant oscillation amplitude. Because of this it is convenient to use a small variable condenser (Ct) for band spread purposes in lieu of the variable inductance used in the basic Tesla. A split stator with one half connected as for Ct and the other half shunted across C1 is infinitely superior, but its use may be conditioned by practical as well as other considerations.

As a guide for constructors, a self-explanatory table of typical values and parameters for Amateur use is given.

"C effective" in the Table of Values gives the total value of the shunt capacity (maximum : minimum) across L, from which the frequency coverage is determined.

The bands given in the table are those agreed at the Atlantic City Conference, 1947, for Region 1 with the exception of 72-73 Mc. which is for doubling to 144 Mc.

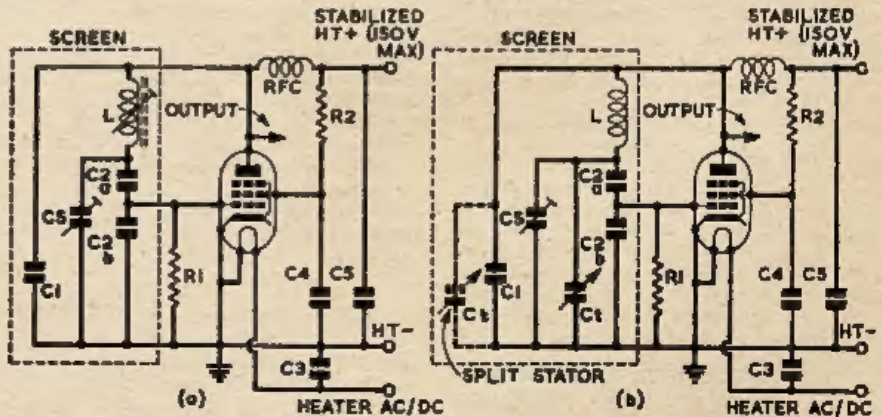


Fig. 1. (a) The basic Tesla oscillator circuit. (b) Tesla oscillator for amateur use. C1, C2a, b, Ct (tuning), C5 (bandsetting), L, see table of values; C3, 4, 5, 0.001 to 0.01μF; R1, 1000 to 10,000 ohms; R2, 27,000 to 75,000 ohms; RFC, 2.5mH. The most suitable valves are the 6AK5, EF54, 6BW7, EF80, 6AM6 and EF50. Other possibilities include the 2A5, 3Q4, 3V4, 6AB7, 6AH6, 6AK6, 6AK7, 6AM5, 6G6, 7AC7, 7AD7, 7Y7, 1851, 5654, DL94, EF42, EL91, N77, N144, RK17, SP181, UF42 and Z62. It might also be possible to use a 12AT7 or 6BQ7A, one half as oscillator, the other half as cathode follower.

CONSTRUCTION

Good quality components should be used. Silver ceramics must be tropicalised or protected against oxidisation. The LC circuit should be shielded by a non-magnetic screen, but it is desirable to ensure a separation of at least two diameters between any part of the coil and the screen. The grid resistor R1 should be selected carefully as its value will affect, to some degree, the level of the harmonic content present in the output. The value of the coupling condenser from the anode to the following stage should not exceed 100 pF.

Cathode keying for the purposes of break-in operation is practicable, but the writer prefers a back contact key or relay, which shorts the screen to earth on "space".

A crystal may be substituted for L, and with C1 removed the circuit can them be operated as a Pierce circuit.

Low heater-cathode insulation may cause a poor note, in which case it is necessary to select a good valve from several of the same type and basing by substitution.

DO NOT FORGET!

The closing date for copy for the January issue is 3rd December.

AUSTRALIAN V.H.F. RECORDS

Band Mc.	Stations	Date	Miles	World Rec'd
50	VK5KL-W7ACS/KH6	26/6/47	5335	10500
	VK6HK-VR2CG	3/1/55	3928	
	VK6WG-VR2CG	3/1/55	3816	
	VK9DB-ZL3GS	26/12/53	2804	
	VK3IM VR2CB	30/12/53	2405	
	VK7BQ-VK9DB	——	2211	
	VK7LZ-VK9DB	——	2211	
144	VK5GL-VK5BO	31/12/51	1328	1400
	VK5QR-VK5BO	9/2/52	1328	
	VK3GM/3-VK7LZ/PF	9/2/52	317	
288	VK5MT/5-VK5RO/5	13/4/52	106	
	VK3AFJ/3-VK3AAF/3	21/3/54	63.5	
	VK5BO-VK5DW/5	1949	25	
576	VK3ANW VK3AKE	11/12/49	21.5	
2300	VK3ANW VK3XA	18/2/50	8.1	150

The above contacts are best known to date, but what of VKs 2, 4, and 7 contacts? Please send FULL details of your best contacts through your Division to F.E., giving particulars of both stations' locations at the time of contact so that your record may be listed above.

Typical Values for Amateur Use

Band	L µH.	Turns & d. dia.	(enam.) S.W.G.	C effective µµF.	Single ended (grid) tuning Ct. C1 µµF.	Cb µµF.	Cbb µµF.	Cgk + Cb + Cbb µµF.	Ct Max. µµF.	Ct Min. µµF.	Split Stator tuning Ct. C1 µµF.	Cb µµF.	Cbb µµF.	Cgk + Cg + Cbb µµF.	Ct Max. µµF.	Ct Min. µµF.
1·8–2·0 Mc/s	25·0	46·0	30	254 / 312	343	4000	470	435	350	30	300	5000	400	464	115 / 115	25
3·5–3·8 Mc/s	13·0	33·0	28	130 / 199	165	2600	250	215	120	30	245	2350	235	213	70 / 70	12
7·0–7·15 Mc/s	7·0	24·5	24	70·6 / 73·6	140	1400	130	122·5	11·0	30	134	1250	125	114	7 / 7	7
14·0–14·35 Mc/s	3·5	17·0	22	34·0 / 36·0	48	700	65	62·2	11·0	3	63	600	58	548	7 / 7	3
21·0–21·45 Mc/s	2·3	14·0	20	23·0 / 25·0	44	475	37	41·2	5·5	3	41	350	33	316	5 / 5	3
28·0–29·7 Mc/s	1·7	12·0	18	16·5 / 19·0	31	300	30	27·2	11·5 *	2	26	210	21	19	7 / 7	2
72·0–73·0 Mc/s	0·7	7·7	14	6·71 / 6·96	8·0	130	4	12·4	1·3	—	7	110	*	14	2 / 2	—

* C1b will be critical at 73 Mc/s and should be made variable 2-6 µµF. Cgk assumed to be 10 µµF and allowed for in value of C1b. C1k assumed to be 5 µµF and allowed for in value of C1.

EMERGENCY!

Amateurs in Ocean Yacht Rescue

It has again been proved that the Radio Amateur is capable of providing a valuable emergency Radio Service.

The rescue of the yacht "Yasme" and the part played by widely scattered Amateurs is not only of interest to radio men but to the public as well.

This is the full report of the events leading up to, and the emergency net which was established between VK9TW/MM on the yacht "Yasme" and VK9FN between 10/9/56 and 17/9/56.

At 2330 on 10/9/56, VS6AE broke in on a three-way QSO between VK9SP, VK9OQ, and VK9FN and passed to the latter the QSP that the yacht "Yasme" (VK9TW/MM) en route from Guadalcanal to Port Moresby had not reported since 1100z on Saturday 9/9/56, and on last sked with KV4AA at 1145z he had reported he was in very bad weather, had lost a mainsail and jib, and was shipping a lot of water. VS6AE requested that as VK9TW was now three hours overdue on sked and had not been heard for 27 hours, that an alert be made, as fears were held for his safety. This message was passed to the Officer in Charge Marine Branch, Captain Foster, at 0045 Eastern Standard on 11/9/56.

VS6AE was again contacted by VK9FN on sked at 1315z on 11/9/56; VS6AE reported that VK9WT/MM was safe and that he had overslept the sked time owing to exhaustion. VK9FN arranged with VS6AE to make a sked for VK9TW/MM and VK9FN at 1130z each day until VK9TW arrived in Port Moresby.

On 15/9/56, VK9FN was not able to keep sked, so arranged with VK9SP to take sked, and to have sked with him at 2200 Eastern on 14110 Kc. Later VK9SP passed the following message to VK9FN from VK9TW: "Have run into heavy seas and gale force winds, position at 1000G, approx. 150 E. longtitude 11 10 south latitude, waves 40 ft. high and 'Yasme' taking water, but position satisfactory; ETA Moresby Monday PM."

On 16th, VK9FN was again unable to keep sked with VK9TW, so arranged with VK9SP to again keep sked with yacht and pass message to him at 2200 Eastern. At 2200 Eastern, VK9FN called VK9SP on 14110, but did not contact. VK2AFA broke in to say VK9TW was working VK9SP on 14130 and was in trouble. VS6AE also called and requested VK9FN take over contact with VK9TW, as VK9SP was not in direct communication with Harbour Master, VK9SP being some 350 miles west of Port Moresby

VK9FN QSY'd to 14130 and copied the following message from VK9TW: " 'Yasme' has been unable to take bearings for four days. Could a d.f. bearing be made so as to obtain a fix?" VK4TT offered to assist by enlisting assistance of D.C.A and Navy in Brisbane. VK4VJ also offered assistance along with VK4NT. VK9FN contacted Captain Hawley, the Harbour Master for Port Moresby, and passed the message to him. He decided to go to VK9FN's shack and discuss the position with VK9TW. This was done and at 0049 the circuit closed until 0730 Eastern, the date being 17/9/56.

At 0725 VK4TT gave VK9FN a wx report for VK9TW. VK9FN also had obtained a weather report at 0715 from local meteorological office. At 0752, VK9TW called VK9FN and was given the following message re weather: "Special wx report for yacht 'Yasme' issued by Jacobson's Met. Office, Port Moresby, at 0715. S.E. winds approx. 15-25 knots and gusty. Probably heavy S.E. swell, scattered showers, visibility 15 miles reduced to 1 mile during rain. Breaks in cloud ¼ to ½ 'Yasme' should be able to take sight for bearings during morning." Skeds were arranged with VK9TW at two hourly intervals, and he reported that he had spent a very bad night with very heavy seas running. At 1000 VK9TW reported he had taken two sights on the sun and gave his position at 338°, and in heavy weather. This information was passed to Captain Hawley.

At 12 noon VK9TW reported his present position was longtitude 146° 49" latitude 9° 46.6" approx. 25 miles from Port Moresby in S.W. direction. This was also passed to the Harbour Master, who arranged to be present at VK9FN's shack and speak to VK9TW at 1400 Eastern. At this sked Captain Hawley pointed out that from his present position "Yasme" should steer a course 075° magnetic. The circuit closed at 1425, with another sked at 1600.

At 1600 VK9TW did not reply to call, and after 10 minutes' calling, Captain Hawley was advised. However, VK9TW came up at 1615, and reported he was in distress, heavy seas were breaking over yacht and had stopped his power unit engine, also yacht was leaking and if main engine, which drove pumps, was to stop, he would sink. This information was passed to Captain Hawley at 1638, who replied he would arrange rescue. At 1715 VK9TW was called, and a message from Captain Hawley passed, saying: "Air-sea rescue operations were in hand."

At 1755 O.I.C air-sea rescue advised VK9FN by telephone that CA61 would depart Moresby at 1800 and head for rendezvous at last known position of "Yasme." VK9TW was called and message passed. At 1800 Eastern, ZL2GX asked for information re VK9TW for QSP to KV4AA. He was informed of the position and asked to keep VK9TW's sked at 1100z who listened for D.C.A., but did not hear them. D C.A. also listened for VK9TW on 14130, but could not hear him. VK9DB also called VK9TW, but VK9TW reported to VK9FN he could not copy VK9DB, and again requested that traffic be handled by VK9FN.

At 1940 VK9DB suggested that Aeradio contact VK9TW direct, VK9TW listening on 3 Mc. for D.C.A. and transmitting on 14130 Kc. This was passed to VK9TW, who listened for D.C.A., but did not hear them. D C.A. also listened for VK9TW on 14130, but could not hear him. VK9DB also called VK9TW, but VK9TW reported to VK9FN he could not copy VK9DB, and again requested that traffic be handled by VK9FN.

At 1945 CA61 called Aeradio and requested that "Yasme" be asked to fire a flare at 2000. This message was passed to VK9FN, who relayed it to VK9TW. VK9TW requested that D.C.A. be asked that CA61 fire first flare, to give "Yasme" a chance to sight it, as "Yasme" only carried three flare cartridges. This was agreed to, and at 1958 CA61 called advising flares going up. At 2002 VK9TW called advising flare sighted 5° N.W. of him. This message was passed to D.C.A. and CA61

2005, CA61 reported that mast head light of "Yasme" sighted.

2010, VK9FN reported all details to Captain Hawley, who passed congratulations on good navigation.

2018, VK9TW reported he could see lights on horizon, distance about 1 mile.

2030, CA61 called asking for instructions as to what was to be done about "Yasme" as they had no tow facilities. CA61 was advised that "Yasme" had 60 fathoms of rope ready for tow.

2038, CA61 reported he was in position.

2043, VK9TW reported tow rope passed to CA61.

2051, VK9TW reported tow commenced and he was closing, as he could not operate and handle tiller. VK9FN passed this to D.C.A.

During the time mentioned above, i.e. from 1615 hours, the following stations were asked to act as guardians of the frequency 14130 Kc., keeping it clear of all QRM: VKs 3KV, 4NT, 4VJ, 4TT, 3JK, 9SP, 2PG, 4PR, 3FH, ZL2GX. These chaps did a splendid job, and enlisted the aid of DX stations to assist, which they did. VK9FN advised position each half hour, as SA61 reported on the hour and at half past.

Finally at 0030, VK9FN closed on 14 Mc., after arranging skeds for 0730 with several stations to report the position. However, an all-night watch was kept by VK9FN on 3.4 Mc. and reports from CA61 logged until 0330, when no report came through. VK9FN phoned D.C.A. at 0340, to learn that as CA61 was within v.h.f. range, they had called on 121 Mc. D.C.A. gave VK9FN the 0330 report, and arranged for them to phone should any difficulties arise. VK9FN then slept until 0530, at which time he called D.C.A. per telephone and was advised that CA61, with "Yasme" in tow, was just entering the passage into Moresby.

At 0558 D.C.A. reported yacht tow had broken just inside the harbour, and that "Yasme" was just entering the town reach of the bay under own power. VK9FN then drove into Port Moresby and was present when VK9TW anchored off customs wharf. After exchanging greetings and congratulations across the water with Danny, VK9FN returned home and called VKs 4TT, 4VJ and 4NT and gave them a detailed report of rescue operations.

At 0830 VK9FN reported per telephone to the local Radio Inspector, details of operations during the evening.

Danny VK9TW was invited by Frank VK9FN home for kai (dinner to you), after which a very enjoyable evening was had listening to a description of his travels from England to Port Moresby, DX worked, and other experiencies.

Frank VK9FN expresses his thanks to all those Amateurs who kept the channel clear of QRM and assisted by obtaining information from Met. and Air Radio in Brisbane, especially VKs 4TT, 4VJ and 4PR. Without the help of all these, the success of the operation would have been very hard. "I consider the W.I.A. members have again proved we can handle an emergency operation with true professional dignity, and are ever willing to do so when the need arises," concluded Frank VK9FN.

Wide-Range Tone Control in Amateur Phone*

Applying "Hi-Fi" Circuitry to Preamplifier Design

BY DON MARTIN, W8QBN

DURING the construction of a "hi-fi" amplifier, I happened on what seems to me like a helpful device for many phone men. The need came about because my high-quality microphone didn't have enough output to drive my Viking II. to 100 per cent. modulation. That is not good, and some sort of preamplifier was clearly indicated.

Using the hi-fi techniques, this preamplifier is different than the usual in that it incorporates three independent response controls: lows, highs, and middle range. In the flat position it can be considered a high-fidelity unit, since it is flat within 0.2 db. from 20 to 20,000 cycles. This, of course, has no place in Amateur Radio and is not the way it is used. By variation of the three controls it is possible to boost the usable frequencies and attenuate the undesirable to any degree over a range of 40 db. This is done without introducing any harmonic distortion and permits adjusting the rig for maximum communications "punch."

I happen to have a very high voice. I cut the highs and the very lows and boost the mid-range. It is really very effective, and a nice feature is that anyone can find the shortcomings in his voice (and microphone) and adjust the preamp. to compensate.

• Adding a few tone-control circuits to your audio amplifier or preamp. will give you a chance to compensate for deficiencies in microphone response and also to utilise your voice for maximum communication effectiveness. The one-tube preamplifier presented here can handle the job easily, since it offers a wide range of control.

THE CIRCUIT

The circuit of the preamplifier is shown in Fig. 1. Four inputs were used in this unit because I hate to get caught with microphones or other audio sources with different types of plugs on their cables, and the four inputs have different types of jacks. The selectable input isn't necessary, of course, and a more standardised station could eliminate it and save the price of three jacks, three capacitors and switch S1.

Both sections of a 12AT7 are used in the preamp. Varying the position of the arm of the 1 megohm "mid-range" control changes the response in the 500 to 5000 cycle range. The "lows" control varies the gain in the 20 to 500 cycle range, and the "highs" control takes care of the frequencies above 5000 cycles.

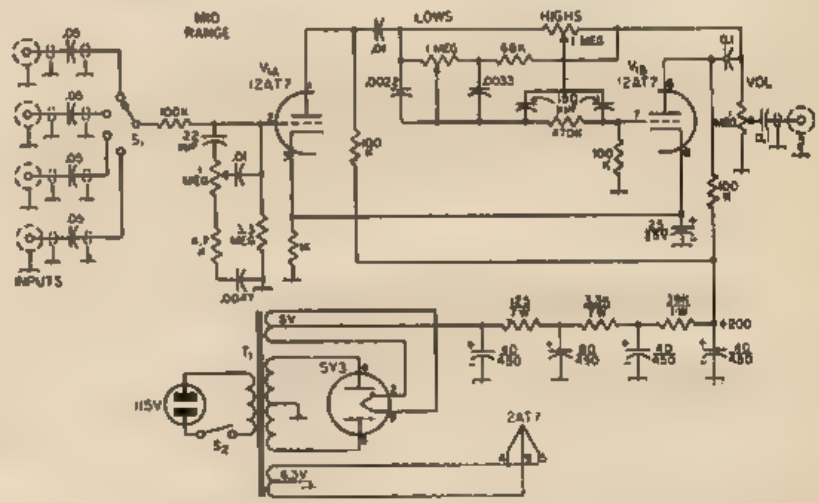
By changing the relative settings of the controls it is possible to get practically any kind of low, middle, or high frequency emphasis or attenuation. Once established for a given microphone and voice, the volume level is established by the setting of the volume control in the output circuit. At W8QBN the highs and lows controls are usually set at minimum and the middle range control is set at about the mid point. This gives a nice "communications" response in the 500 to 3000 cycle range. The volume control must be set low enough to avoid overdriving a subsequent audio stage in the transmitter.

CONSTRUCTION

While the construction ideas of others will undoubtedly differ from mine, it is suggested that the input and output leads be shielded to avoid the possibility of oscillation or excessive hum. A common ground bus was used instead of a chassis return, and the chassis connections in Fig. 1 represent connections to this ground bus, except at the input and output jacks. In the two versions I have built, no trouble with hum or oscillation was encountered, and the signal-to-noise ratio is excellent. You will notice from Fig. 1 that there is plenty of power supply filtering, and this is absolutely necessary in any equipment that will pass 60 cycles and lower.

USE

A final word of warning is in order. Anyone who builds this or a similar preamplifier should not use it on the air set for maximum frequency response. Emphasising the higher frequencies is not a considerate way to operate in our crowded bands, even if you do have a yen to sound less masculine than normal. From my personal standpoint, the unit has several purposes. The primary one is to **limit** the transmitted bandwidth. It is also of some aid to the older man who sounds too young, or the younger operator who sounds too old. With certain judicious variations of the tone controls, they can all sound like W2KR, W8SCS, and the few others who are gifted with wonderful communications voices!



BOOK REVIEW

THE ARGONAUT A.M./F.M. M.W./V.H.F. TUNER-RECEIVER

This book presents an unusual solution to the problem of v.h.f./m.w. receiver design. Most of the contemporary designs have complicated switching to accomplish the change over. The Argonaut, however, uses only a simple three-pole switch

The book has several very clear illustrations, a chassis layout plan and full circuit and wiring diagrams. The text covers all constructional details fully. There is also a comprehensive chapter on alignment and trouble shooting.

This is a book no hi-fi enthusiast can afford to be without.

Our copy direct from Data Publications Ltd., 57 Maida Vale, London, W.9. Price 2/- stg.

THE AMATEUR'S HIT PARADE

"When I'm calling CQ-oo,oo,oo—oo,oo."

"I'm gonna hang my antenna on mother's washing line."

"How much is that crystal in the window?"

"Ten red bottles, hanging on the rig."

"The old carbon mike, she ain't what she used to be!"

"Go fly a kite and tie your antenna to its tail."

"QRMary, QRMary, it's a grand old game."

"Roll out the dipole."

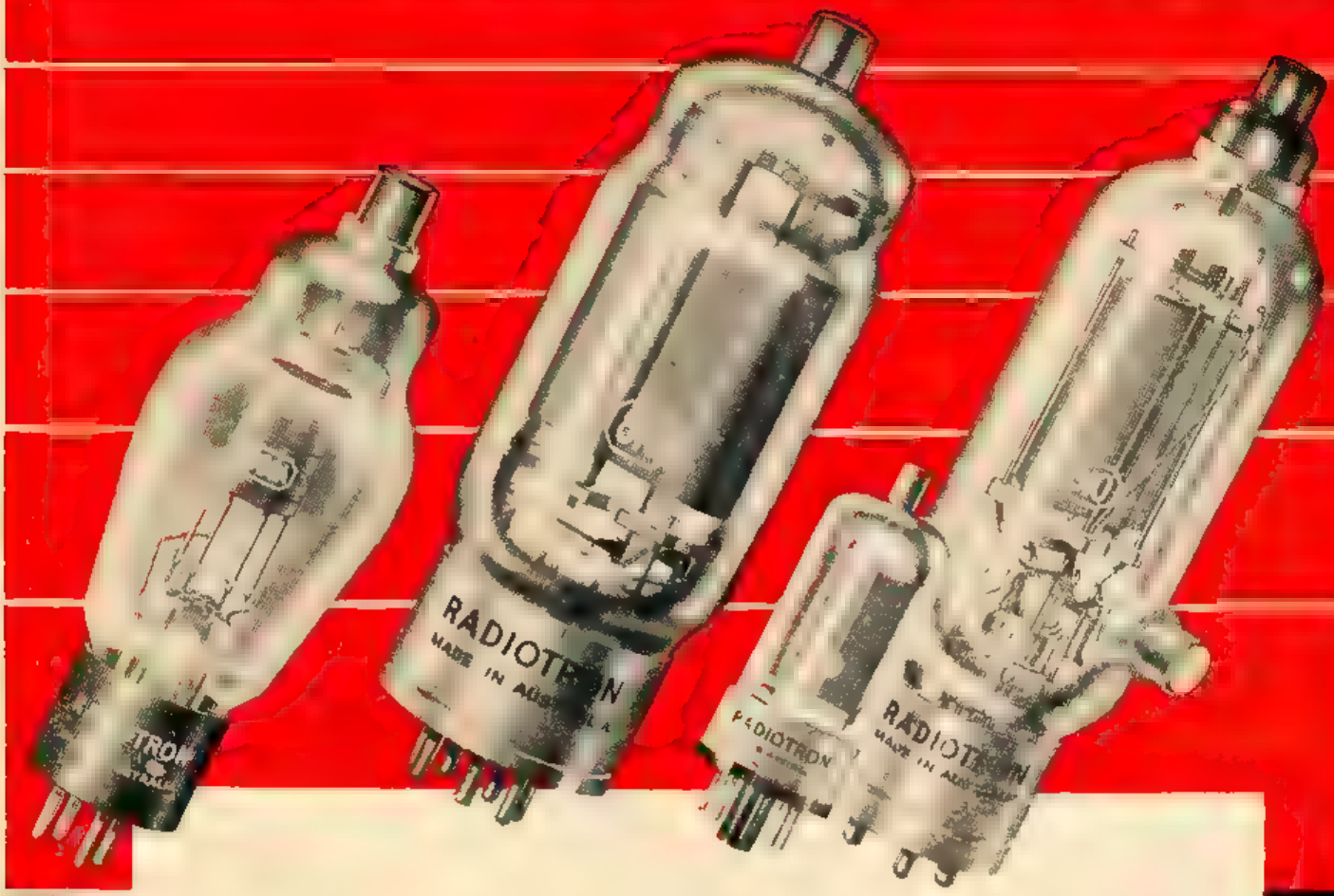
"Yes, we have no harmonics!"

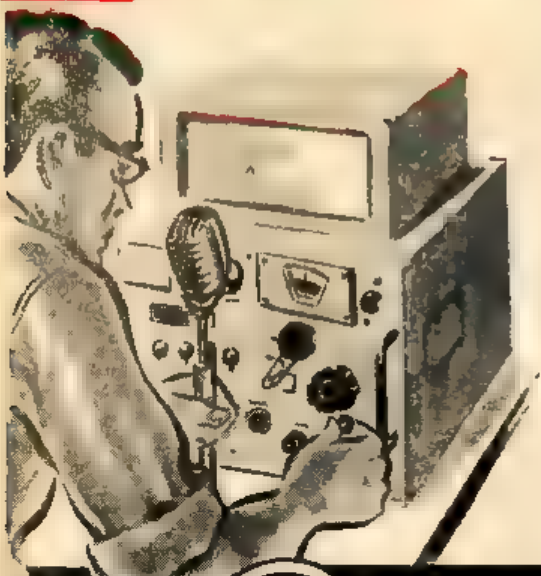
"I took my rig to a party, but nobody asked me to stay!"

—VK3CN.

* Reprinted from "QST", July, 1956.

RADIOTRON POWER VALVES





Today's high standards of radio performance are dependant upon the use of first quality components.

Radiotron valves are manufactured to exacting standards which ensure you of the ultimate in performance at all times.

Be sure of the quality and consistency of your signals by using Radiotron Power Valves.

Important: When ordering valves, be sure to mention "Amateur Radio" so that priority can be given to your order.

AWV **RADIOTRON**

AMALGAMATED WIRELESS VALVE CO. PTY. LTD.

ELECTRIC DEPOSITED COPPER FOIL

The Royal Mint Refinery is pleased to announce that supplies of electric deposited copper foil are now available in a combination of thicknesses and widths hitherto unobtainable in this country. The range of widths quoted below makes the foil suitable for the production of copper clad laminate which is required for the manufacture of etched foil printed circuits.

During the research period considerable attention has been given to provide foil which is bright and polished on one side and which has a matt surface on the other. The matt surface ensures a good bond between the copper and the laminate, and from this should arise new opportunities in the use of copper clad materials in the fields of radio, telecommunications and switchgear.

The physical properties of the foil are in most respects similar to that of hard rolled copper sheet and one of its great advantages lies in the fact that it is supplied in continuous length coils. The bulk of the foil at present being supplied is for the printed circuit industry, and the following is a general specification for this type of foil:—

Purity: Minimum 99.9%.

Conductivity: Minimum 95% (I.A.C.S.)

Width: Up to 42½" = 1079.5 mm. 51" = 1295 mm. foil became available as from July, 1956.

Thickness: Generally any thickness between 0.001" and 0.004" measured by weight.

For example:

Thickness:		
nominal inch	0.001"	0.00135"
nominal mm.	0.025 mm.	0.035 mm.
Ounces per sq. foot	0.735 oz.	1 oz.
Grams per sq. metre	224 gr.	305 gr.
Thickness:		
nominal inch	0.0027"	0.004"
nominal mm.	0.070 mm.	0.100 mm.
Ounces per sq. foot	2 oz.	2.94 oz.
Grams per sq. metre	610 gr.	896 gr.

Accuracy of gauge to close limits is maintained across the width of the foil.

Despatch: Coiled on stiff compressed paper mandrels 3" (76.2 mm.) inside diameter, the maximum coil weight for the widest material being 100 lbs. (45.4 kg.).

Electro deposited copper foil could, however, be made in narrower widths and in even thinner gauges than those specified above, the minimum thickness being 0.00012" = 0.003 mm.

The foil has been successfully bonded on plastic laminate both rigid and flexible; this suggests that it is equally suitable for bonding on paper, fabric or timber either as a surface cladding or a sandwich layer.

The Sole Australian Agents are Mica and Insulating Supplies Co. Pty. Ltd.

EL34—Output Pentode

Physical Specifications—
Cathode: Coated unipotential.
Base: Dwarf shell Octal 8-pin with metal retaining ring.
Bulb: T10.
Mounting Position: Any.

Basing Connections—
Pin 1—Grid No. 3.
Pin 2—Heater.
Pin 3—Plate.
Pin 4—Grid No. 2.
Pin 5—Grid No. 1.
Pin 6—No connection.
Pin 7—Heater.
Pin 8—Cathode.

General Electrical Data—
Heater voltage: 6.3 volts.
Heater current: 1.5 amp.

Direct Interelectrode Capacitances—
Grid 1 to all other electrodes, 15.5 pF.
Plate to all other electrodes, 10.2 pF.
Between Grid 1 and Plate, 1.0 pF.
Between Grid 1 and Heater, 1.0 pF.
Between Heater and Cathode, 10 pF.

MAXIMUM RATINGS

Plate volt. (without current)	2000 V.
Plate voltage	800 V.
Plate dissipation (without signal)	25 W.
Plate dissipation (with signal)	27.5 W.
Screen grid voltage (without current)	800 V.
Screen grid voltage	425 V.
Screen grid dissipation (without input signal)	6 W.
Screen grid dissipation (at max. power output)	12 W.
Cathode current	135 Ma.
Control grid voltage at control grid current = + 0.3 amp.	—1.3 V.
Maximum control grid circuit resistance for Class A and AB conditions	700 K.
Maximum control grid circuit resistance for Class B condition	500 K.
External resistance between heater and cathode	20 K.
Voltage between heater and cathode	50 V.

CLASS A AMPLIFIER

Plate/Screen grid supply voltage	265	265	V.
Plate voltage	250	250	V.
Screen grid resistor	2000	0	O.
Suppressor grid volt.	0	0	V.
Control grid voltage	—14.5	—13.5	V.
Plate current	67	100	Ma.
Screen grid current	9.3	14	Ma.
Mutual conductance (micromhos)	9000	11000	
Amplification factor of screen grid with respect to control grid	11	11	
Plate resistance	18000	15000	O.
Load resistance	3250	2000	O.
Input voltage (r.m.s.)	10	9.3	V.
Power output	3	12	W.
Distortion	10%	10%	
Required input volts for 50 milliwatts output (r.m.s.)	0.65	0.5	V.

CLASS AB AMPLIFIER

Plate and screen grid supply voltage*	375	V.
Screen grid resistor†	500	O.
Suppressor grid voltage	0	V.
Cathode resistor	132	O.
Load resistance plate to plate	4000	O.
Plate current (zero sig.)	2 x 75	Ma.
Plate current (max. sig.)	2 x 90	Ma.
Screen grid current (zero signal)	2 x 10	Ma.
Screen grid current (max. signal)	2 x 22	Ma.
Input voltage, grid to grid (r.m.s)	2 x 20.5	V
Power output	37	W.
Distortion	3.5%	

* Under maximum signal conditions, voltage drop across each section of output transformer, approximately 25 volts.
† Common to both valves.

CLASS B AMPLIFIER

Plate supply voltage*	350	375	V.
Screen grid sup. volt.	350	375	V.
Screen grid resistor†	500	500	O.
Control grid voltage	—36	—36	V.
Suppressor grid volt.	0	0	V.
Load resistance pl.-pl.	5000	4000	O.
Plate cur. (zero sig.)	2x20	2x20	Ma.
Plate cur. (max. sig.)	2x79	2x99	Ma.
Screen cur. (zero sig.)	2x2.4	2x2.4	Ma.
Screen cur. (max. sig.)	2x26	2x26	Ma.
Input signal, grid to grid (r.m.s.)	2x25	2x25	V.
Power output	37	46	W.
Distortion	5%	4.5%	
Plate supply voltage*	400	425	V.
Screen grid sup. volt.	400	425	V.
Screen grid resistor†	800	800	O.
Control grid voltage	—42	—42	V.
Suppressor grid volt.	0	0	V.
Load resistance pl.-pl.	5000	4400	O.
Plate cur. (zero sig.)	2x20	2x20	Ma.
Plate cur. (max. sig.)	2x91	2x106	Ma.
Screen cur. (zero sig.)	2x2.4	2x2.4	Ma.
Screen cur. (max. sig.)	2x27½	2x28	Ma.
Input signal, grid to grid (r.m.s.)	2x29½	2x29½	V.
Power output	48	58	W.
Distortion	5.0%	4.5%	
Plate supply voltage*	750	800	V.
Screen grid sup. volt.	375	400	V.
Screen grid resistor†	800	750	O.
Control grid voltage	—41	—41	V.
Suppressor grid volt.	0	0	V.
Load resistance pl.-pl.	11000	11000	O.
Plate cur. (zero sig.)	2x20	2x20	Ma.
Plate cur. (max. sig.)	2x86	2x98	Ma.
Screen cur. (zero sig.)	2x2.0	2x2.0	Ma.
Screen cur. (max. sig.)	2x26	2x27½	Ma.
Input signal, grid to grid (r.m.s.)	2x28½	2x28½	V.
Power output	90	108	W.
Distortion	7%	6%	

* Under maximum signal conditions, voltage drop across each section of output transformer, approximately 25 volts.
† Common to both valves.

TRIODE CONNECTED
(Screen grid connected to plate)

Class A

Plate supply voltage	375	V.
Suppressor grid voltage	0	V.
Cathode resistor	370	O.
Plate current	70	Ma.
Load resistance	3000	O.
Input voltage (r.m.s.)	19.2	V.
Power output	6	W.
Distortion	9%	

Class AB

Plate supply voltage	400	V.
Suppressor grid voltage	0	V.
Cathode resistor	220	O.
Plate current (zero signal)	2x65	Ma.
Plate current (max. signal)	2x71	Ma.
Load resistance plate to plate	5000	O.
Input signal grid to grid (r.m.s.)	2x22	V.
Power output	16.5	W.
Distortion	3%	

Ross Hull Memorial V.H.F. Contest, 1956-57

RULES

1. The Contest will take place in the 56-60 Mc., 144-148 Mc., and 288-296 Mc. bands, and will commence at 0001 hours E.A.S.T on 1st December, 1956, and will continue until 2359 hours E.A.S.T., 31st January, 1957. Interstate, Intrastate and Overseas contacts are allowed. Cross-band working is not allowed. L.A.O.C.P. licensees are encouraged to work on the 144 Mc. and 288 Mc. bands.

2. Only one contact on each band with any one station, per twenty-four hours, commencing midnight E.A.S.T., to count for scoring purposes.

3. Exchange of a serial number will constitute a contact.

4. The serial number of five or six figures will be made up of the RS (telephony) or RST (telegraphy) report plus three figures which may commence with any number between 001 and 100 for the first contact and which must increase in value by one for each successive contact, e.g. if the number chosen for the first contact is 050, then the number for the second contact must be 051, for the third 052, and so on. If any contestant reaches 999, then he must start again 001, and continue as above.

5. **Scoring.**—Points allotted, apply to each band worked.

Interstate and Oversea Contacts: 5 points for the first contact with any particular station, 4 points for the second, and so on to the fifth contact for 1 point, after which no more scoring contacts with that particular station can be made on that band, for the duration of the Contest; e.g. VK5ABC may work VK2XYZ five times on each of the four bands, for a total of 20 contacts.

Intrastate Contacts (for VK Call Areas only).

(i) Five points for the first contact with any particular station, four points for the second and so on to the fifth contact for one point, after which no more scoring contacts with that particular station can be made on that band for the duration of the Contest.

(ii) Stations located beyond a **radius** of 100 miles of any Capital City (Federal Capital excepted) will double their score for ALL contacts; e.g. VK3ABC (Mildura) works VK3XYZ (Melbourne) for the first contact: VK3ABC scores 10 points, while VK3XYZ scores 5 points. If VK3ABC works VK3PQI at Red Cliffs, both score 10 points for the first contact.

6. **Logs** shall contain the following information: Date, time (E.A.S.T.), **band**, call of station contacted, serial number sent, serial number received, points claimed for the contact, and at the foot of each page the total points claimed; and at the end, the grand total.

Logs shall be signed by the competitor, together with a declaration to the effect that the station was operated strictly in accordance with the rules, and spirit of the Contest. The decision of the Federal Contest Committee shall be final and binding.

Logs must be received by the **Federal Contest Committee, Box 1234K, G.P.O., Adelaide, South Australia,** not later than **1st March, 1957.**

7. Entries will be accepted from all States of the Commonwealth and Districts of New Zealand. Check logs from other countries would be appreciated by the Contest Committee.

8. The regulations governing the control of Amateur Radio in each contestant's country must be observed.

9. **Awards:** (a) For the purpose of Awards, Northern Territory will count as a separate call area.

(b) The outright winner of the Contest within the Commonwealth of Australia will receive an appropriately inscribed Certificate.

The top financial member of the W.I.A. will hold the Ross A. Hull Memorial Trophy for a period, and in addition will receive an appropriately inscribed photograph of the Trophy.

(c) The highest scorer in each call area in Australia and New Zealand will be awarded a Certificate. The Federal Contest Committee reserves the right to make any additional Awards.

(d) A Certificate will be awarded to the L.A.O.C.P. licensee who gains the highest score in each call area. (Operation must be confined to the 144 Mc. and 288 Mc. bands with A3 emission, to conform with the Departmental Regulations.)

10. The decision of the Federal Contest Committee will be final and binding upon all matters pertaining to this Contest.

AMATEUR CALL SIGNS

FOR MONTH OF AUGUST, 1956

NEW CALL SIGNS

VK— **New South Wales**

2AQ—N. MacLeod, 41 Kangaroo St., Manly.
2CC—C. M. Carter, C/o. 2KM, Kempsey
2CN—R. C. Prout, 9 Agnes St., Mayfield, Newcastle.
2FF—G. V. McLeod, 44 Monro Avenue, Kirrawee.
2GC—S. D. Glyde, Private Bag, Bowraville.
2HY—J. L. Rath, 80/82 Flora St., Sutherland.
2KK—B. K. Burton (Rev.), The Manse, Wee Waa St., Walgett.
2OZ—W. E. Dixon, 20 Thyra Rd., Palm Beach.
2AAF—A. J. Fisher, 38 Carters Lane, Fairy Meadow, Wollongong.
2AIA M Eagles (Mrs.), 41 Cotswold Rd., Strathfield.
2AKH—G. F. E. Knox, 18 Brentwood Ave., Turramurra.
2ZAO—R. F. Ruff, 66 Toowoon Bay Rd., Long Jetty.
2ZBF—J. K. Doherty, 27 Harbour St., Mosman.
2ZBJ G. L. C. Jenkins, Sgts. Mess, No. B.F. T.S., R.A.A.F., Uranquinty.
2ZDR—D. Barter, 28 Titriki St., Blacksmiths.

Queensland

4ER—R. E. Lees, Box 18, P.O. Theodore.
4GW—R. H. Varnes, 3 Leeson St., West Bundaberg.
4JT—J. L. Taylor, 8 Heathwhite St., Tarragindi.
4MR—M. E. Russell, 45 Apollo Rd., Bulimba.

South Australia

5ZAU—J. G. Rodger, 38 Lynington St., Tusmore.

Tasmania

7AD—C. R. Pearce, 39 Beach St., Bellerive.
7SK—M. D. L. Sidebottom, Tranmere Rd., Howrah.

Territory of Papua and New Guinea

9KC—W. Bock, Pandora Cres., Port Moresby.

CHANGES OF ADDRESS

VK— **New South Wales**

2BO—H. J. Hart, 8 Killeaton St., East St. Ives.
2JW—N. W. Skulander, 25 Franklin Rd., Orange.
2MJ—A. J. T. Crisp, 51a Washington St., Bexley.
2MV—C. Welsh, Flat 410K, Housing Settlement, Herne Bay
3OF—J. W. Francis, Post Office, Euchareena.
3SW—S. Ward, 67 Marco Ave., Revesby.
2TS—T. G. McEwan, S.S. "Iron Wyndham," C/o. Broken Hill Pty. Co. Ltd., Newcastle.
2XU—W. L. Nye, 10 La Perouse St., Fairlight.
2WX—R. M. P. Wray, 50 West Cres., Hurstville.
2ABX—R. C. Gibson, 128 Russell St., New Lambton.
2ACB—A. C. Bell, 338 Oxford St. Paddington.
2AJH—J. E. Hills, 18 Coleridge Rd., Pymble.
2AJP—J. Weaver, 24 Coromandel St., Goulburn.

Victoria

3EL—S. D. Smith, 36 Essex St., Pascoe Vale.
3HZ—E. M. Clyne, 20 Princes St., Shepparton.
3IQ—K. J. Duff, 10 Palmerston St., Camberwell.
3SU—S. G. Edwards, 270 Beaconsfield Pde., Middle Park.
3VE—V. W. Harrison, Roseville Ave., Sorrento.
3ADD—H. L. Daniell, 64 Park St., Hamilton.
3AEC—E. W. Caddy, 22 Marony St., Bairnsdale.
3AGV—G. S. Vincent, Queen St., Sth. Elliminyt.
3AIW—L. H. Weller, 46 Pepperell Ave., Syndal.
3AJV—K. G. Avery, "Frognall," 54 Mont Albert Rd., Canterbury
3AKC—C. J. Griffiths, 16 Newton St., Shepparton.
3ALT—L. E. Wraight, Lot 38 Vannon Drive, Ashwood.
3AVN—T. F. Webb, 54 Forster St., Norlane.
3ZBZ—A. W. Buesst, 239 Domain Rd., South Yarra.
3ZCA—R. J. Skevington, 44 Northcote Ave., Caulfield.
3ZCG—W. G. Francis, 13 Mirboo St., East Newborough.

Queensland

4CX—J. E. D. McDowell, 44 Fisher St., Gladstone.
4KJ—W. E. C. Sawyer, 66 Brae St., Rockhampton.
4NI—A. H. Nicholls, 206 Newmarket Rd., Wilston, Brisbane.

South Australia

5RZ—O. L. Nestroom, 11 Haigh St., Broadview.
5XK—A. J. Hewitt, Main St., Lucindale.
5ZX—A. H. Heath, 3 Rutland Ave., Brighton.

Western Australia

6RH—R. A. Hallamore, 70 Stirling Highway, Nedlands.
6ZAJ—B. W. A. Jacobs, 8 St. Albans Ave., Highgate.

Tasmania

7SD—D. M. Smith, 87 Buss St., Warrane.
7WT—R. A. Milledge, 60 Derwentwater Ave., Sandy Bay.

Territory of Papua and New Guinea

9AH—A. J. Humphries, District Office, Port Moresby
9AS—J. A. Whittaker, C/o. R.T.C., Wewak.

CANCELLED CALL SIGNS

VK— **New South Wales**

2AFO—T. T. Toakley.

Victoria

3ABQ—M. Howden.

Queensland

4KC—W. Bock Now VK9KC.
[redacted]
7LX—K. J. Briggs Transferred to Brisbane.

PERMITS GRANTED FOR TELEVISION EXPERIMENTS

VK— **New South Wales**

2AHQ/T—H. E. Quilty.
2ALX/T—A. H. Wignell.
2AVL/T—C. F. Luck.
2ZAL/T—A. R. Hennessy.

Victoria

3IE/T—L. A. Seedsman.

Queensland

4MX/T—J. R. Martin.

South Australia

5EN/T—A. R. E. Nitschke
5MO/T—E. P. McGrath.

YL CORNER

BY PHYL MONCUR

Would you like to meet Lesley Fullagar, our XYL for this month? Then allow me to introduce her to you.

Lesley is the XYL of Dr. J. Fullagar (2AJY) and lives in a small town north of Sydney. She has four young children, manages to carry on a part-time professional career and on top of that does the QSLs. Here is her own story as she told it to me. She writes:

"Sometimes I begin to wonder if I haven't been just a little bit badly done by with this Amateur Radio business. At the time I married my husband he was not interested in Amateur Radio except for occasionally listening in on the band, although he had been interested in Radio and had built his own receivers since he was a young chap of about 11. At the time we married, he loved playing records on his home-built amplifier, of noble performance but hair-raising appearance.

"In the first few years of our marriage constant amplifier-modification went on, so that I was lucky if I could play myself records for three weeks at a stretch. Then for many weeks (the length of time being due to the small doses of spare time that could be allotted to the hobby after the regular hours of occupation—'It's hard when work gets to interfere with your hobbies' being his cry) the machine was dismembered, being usually spread over the dining-room table and needing to be pushed back to clear a sufficient corner to eat breakfast. Anyway, knowing of his hi-fi interests in advance, I did at least feel that I had walked into that lot with my eyes open.

"Amateur Radio got a toe-hold after a chance meeting with an Amateur in Rockhampton (4EC). Acquaintance quickly ripened to friendship and led, of course, first to invitations to the 'Easy Charlie' shack, and later to insidious propaganda about the advantages and interest in having one's own licence and transmitter. Cunningly, the XYL's side of the picture was not painted, and all unsuspecting I raised no objections. I even went so far as to study the pre-requisite morse code with my OM, but his bitter complaints about my inability to receive his efforts (which I, of course, averred was due to his inferior sending) and my demands for repeats, which he said were holding him back in his advance, finally made the game seem not worth the candle, so I left him to it.

"The licence finally came through almost simultaneously with the birth of third child—who also happened to be first son. The day I was to come home I was left languishing until the afternoon, for the morning (it was Saturday) just HAD to be spent hoisting one ultra-heavy 40 ft. hardwood antenna mast, with the aid of numerous able-bodied Amateurs. I admit that I found it as fascinating as the OM at first, spending longer hours than I should listening in at night. I was a little put out at finding wee son proudly referred to, over the air, as the 'harmonic,' whereas his sisters (beautiful children to their proud mother's eye) were dubbed 'sub-harmonics'!!

"After about 100 contacts had been made I could see the advantages to an Amateur of a card index of QSOs and of course was still sufficiently green an XYL to suggest that I should compile one for him and keep it up to date. I also used to make out the QSLs—except for the last line with its personal comments and 'Very 73' of course. I kept this up nobly and used to choose the shack for sewing and such activities so that I could listen in and sometimes also have my little say until entering hospital for fourth child—second son. The index was up-to-date when I went in, two years ago now, but I fear has not been touched and the QSLs have been left to the OM since, though I still haven't learnt my lesson and am hoping to get enough time in the future for the mammoth task of catching up.

"We had three temporary abodes until we at last moved into our own home, when of course settling-in kept us busy (not too busy though, for the OM to set up a shack and an antenna pretty well first thing and to maintain contact with Rockhampton and start off again collecting countries for his DX C.C.) On the big move south the first things installed in the car were portable rig and receiver, AFTER them, space for family and luggage was considered. At each of our temporary dwellings, said portable gear was set up almost before anything else was done.

"When a new Auxiliary for the local hospital started up I went along (my OM is a medico and uses the hospital of course for his patients)

(Continued on Page 17)

FIFTY-SIX MEGACYCLES AND ABOVE

Five metre enthusiasts should watch for VK1IJ on Macquarie Island, his frequency is 56.640 Mc. Further information regarding skeds will be advertised over VK3WI from time to time.

VICTORIA

We had another wonderful turn-up to the last Fox Hunt with twelve cars competing and over thirty enthusiasts counting Amateurs, navigators, second ops. and XYLs. The hunt traversed Richmond, Studley Park, around the Boulevard and then over to Ascot Vale and Maribyrnong. The fox found some really horrible spots to hide in, but the hounds ferreted him out every time. Everyone had a lot of fun as usual and we were very pleased to have some new starters. One was John 3ZCJ, who did very well in spite of a broken feed line, and another new one was Associate Bert Stebbing who was second op. for 3ANS. Bert enjoyed the hunt so much he went home full of ideas to build up some gear of his own for the next hunt. The winner for the evening was Laurie 3ALY and there was a dead heat for second place between the two Rays (3KD and Ray Price) and the two Davids (3ZAQ and 3ZAT). The final location was held at the home of Eric 3ADU and Ruth Manson, in Essendon, where the group finished off the evening having supper together and the usual final rag-chew. Thanks for opening your home to us Eric and Ruth.

We all missed our control station, Bob 3OJ, who was not able to be there to help straying hounds back on the track as he has had to undergo two operations within a couple of weeks, making his third operation for this year. Bob has had a pretty tough run this year but we all wish you a speedy recovery Bob and hope you'll soon be back with us all again.

Members of the V.h.f. Group spent a most enjoyable evening at the last V.h.f. meeting. The lecture was not, as is usual, a technical one, but was more in the field of entertainment. The lecturer was Mr Dave Callow, a radio physicist, and holder of the call 1DC, who was a member of the A.N.A.R.E. on Macquarie Island in 1955 and he gave an illustrated talk covering his stay on the island. He showed a very excellent and most interesting collection of coloured slides illustrating life on the island, both of the men and the animal and bird life there. His shot of the scenery, the penguins and seals were very fascinating. His talk on life on the island was also very interesting. Dave has a very ready wit and his amusing little stories brought forth many laughs. One quip that amused everybody greatly was his feelings in regard to Amateur Radio. It was wonderful, he said, to be able to chat with somebody over the air for a change and not know word for word what the other fellow was going to talk about. He was sporting a very fine beard, everyone on the island always does, of course, but he mentioned one decided disadvantage with the beard. When it snows, he said, your beard gets clogged up with snow which soon turns to ice, and it's always very difficult trying to thaw your beard out. All enjoyed his lecture very much and applauded warmly at the conclusion.

Conditions are apparently improving greatly as it has been reported that JAs have been heard breaking through on 6 metres. Michael 3ZCS, Malcolm 3ZCL and Alf 3IE have all built up gear for 588 Mc. Michael and Malcolm are also experimenting on micro-waves. Butter-fingers, David 3ZAQ, has further troubles. He saved up and bought himself an 832 and then went and dropped it and broke it before he had even plugged it in! John 3ZAI and Ray 3KD are both busy working on t.v. home-brew rx's.

For those interested in catching up on a little practice in c.w., there is a relay of the slow morse practice transmissions every Sunday evening at 8.30 p.m. on the 2 mx band on 146 Mc for the special benefit of v.h.f. listeners. 3YS, 3ABA and 3FP take it in turns to handle this relay and they are all situated due east of Melbourne.—Phyl Moncur

SOUTH AUSTRALIA

V.h.f. work in this State has not come to a stop—far from it—but lack of notes on that activity from here may have given that impression. An endeavour will be made to pick up the threads and let you know of the movements, activities, plans and future intentions of the v.h.f. boys as we go along, which task will be aided by me hearing from some of you, and thus get the ball really rolling again.

Starting from the North we have a flock of Z calls at Woomera, beam them this way chaps, you will be surprised how they can get through. Ern 5EN at Pirie, has 100 watts on 2 mx, p.p. 6146s we think, and a xtal front-end for his rx that has to be seen to be believed. A magnificent job, brass chassis, and a crop of 6BQ7s popping out of it that would be the envy of anyone. It is capable of tuning 5, 2 and 1 mx and has been used on a successful contact on 1 mx between he and Reg 5QR. Much planning and patience was displayed on that outstanding contact, but they stuck to it and finally made the grade. Ern used a long-long yagi with so many directors on it that they had to be counted, you just couldn't look at it and say 6 or 8 el. Anyway, congrats Ern and Reg.

Bob 5HI is patiently awaiting a break through to him on 2 mx and anxious to contact anyone near him to help make the grade. Gawler has two types on 2 mx and shortly to be added to by a Z call; 5 mx also coming up. Les 5AX is the stalwart who never really deserts these frequencies, and manages to keep on the air no matter what modifications he attempts to the tx. He will be restoring his 12 el. co-linear soon so watch out.

The writer has at long last put the 5 over 5 on the tower (about 48 ft. up) and hopes to have it in use before this is read. P.p. 6146s 100w input will feed it, and under that 5 over 5 is a 4 el. on 5 mx that will be warmed up by a similar outfit soon. 2 mx signals heard here in recent times, include Bill 5ZAX who is on most Sunday nights, Reg 5QR who never fails to pin my S meter back, George 5BG who never fails to bob up with something new, Neil 5ZAW puts in a fine sig. So also does 5GL, 5ZAE, 5ZAF, 5HD, 5RO and 5MT.

Keith 5MT did some good work and tests with me on mobile 2 mx some time back when he worked Hughie 5BC from Mt. Lofty whilst mobile, but haven't heard him about much lately. The South East boys seem to be getting steamed up these days. Claude 5CH has worked Dave 5ZAM at Penola, which of course has aroused some interest. Col 5CJ also on 2 mx these days.

2AGZ (Broken Hill) will shortly be operating on 2 mx with a 5 over 5 directed at Adelaide. He will be looking for contacts and may repeat the procedure of last year in calling at regular intervals, but with the carrier on all the time. More of this when all the dope is known. Don 2AMN can be contacted for information and progress in the meantime.—5EF

WESTERN AUSTRALIA

Sept. 29 saw another Fox Hunt under way. King's Park once again the starting point, with Murray 6ZAM and Tom 6ZAF being the foxes. The roll up must have been close on the best to date with 13 cars taking part. At 8.15 p.m. sharp, the signal came on and the cars got under way, screaming their way through Perth. It's surprising the way the 3 and 4 el. beams attracted the attention of passers by. Syd 6SJ was the winner and it was good to see him break a run of outs, nice work Syd. Rolo 6BQ was very close again—handicapped by lack of phones for his diode detector, he'd lent them to Bob 6BE. Don 6ZAV and driver Roy did better than the last time, thanks to a genemotor power supply, instead of a vibrator. "Never seen so many dead-end roads in them tha' hills." Supper was partaken of at Murray's QTH at Kalamunda. Thanks Murray, what a view you have from the house!

I hope there is a bit more activity on the bands during the coming months.—6ZAV

YL CORNER

(Continued from Page 16)

and as a new arrival, was astonished to find myself elected Secretary. Then later I was offered a temporary job (I too am professionally qualified) and since then others have followed with only a week or so in between.

"I am not able to listen in as consistently as I used to, as unfortunately the shack here is a tiny room, just large enough for rig, receiver, the OM and the inevitable accompaniment of weird junk. However, on occasions when I squeeze in and stand carefully (so as not to knock anything over) behind the op's chair, I've found it as fascinating as ever and although it wouldn't do to admit it to the OM, I do regret the fact that the room is too small for regular XYL participation.—73 Lesley Fullagar."

Lesley has promised to send in further contributions from time to time. Now what about all the rest of my readers, I must have one other one surely. What about you sending in a contribution? We'd enjoy hearing your slant on "Life with Amateur Radio."—P.M.

DX ACTIVITY BY VK3AHH†

PROPAGATION REPORT

3.5 Mc.: The only break-throughs reported were to North America, 0830-1130z.

7 Mc.: Openings to North America and the Far East seemed to be quite reliable. In addition, conditions to South Africa were reported to be satisfactory around 1800z.

14 Mc.: This band followed the usual pattern. Times of openings were in accordance with what could be expected, in other words conditions were so good that the openings overlapped each other.

21 Mc.: This band also displayed reliable conditions to all continents, and no extraordinary openings have been reported or observed.

27-28 Mc.: During the month, this band showed reliable openings to all continents, times being as usual.

NEWS AND NOTES

Radio districts in **Chile** have been re-allocated (from NCDXC)

CE3ZO is ex-G6ZO (from 2QL).

PJ2ME represents St. Marteens on 14 Mc. c.w. (from W6YY).

Congratulations are due to the boys of the Neckartal (DL) Radio Club, DL-1CR, DL3AO, DL9CI and DJ2OS, for a well-organised and efficient DXpedition to Luxembourg in August.

Beginning on 23rd October, G3IDC will be active from several spots in Europe, Africa, Middle East, and Asia: 23/10: 5A2; 24/10: VS9; 25-26/10: VQ4; 27-30/10: VS9; 1-3/11: 4S7; 4-17/11: YI2AM; 18-21/11: ZC4; 22-23: ZB1; and 24-25/11: ZB2 (from W6YY).

A new station has commenced operation from **Antarctica: FB8YY** in French Adelie Land (from W6YY).

JZ0ACK and JZ0ADM are new stations in **Dutch New Guinea** (from 3ADW, 3ALD, 5AB).

It has been reported that the district **Tannu Tuva**—Zone 23—will be represented by **UA0KTT** in December (from W6YY).

QTHs OF INTEREST

(From W6YY, NCDXC, and VKs 2QL, 2AIR, 3ADW, 3AGD, 3ALD, 5AB, BERS196 and Rod de Balfour)

FE8AE—Box 408, Douala, French Cameroons.
FE8AG—Box 298, Douala, French Cameroons.
JZ0ACK—E. Walsh; JZ0ADM—T. Moulos, C/o. Naval P.O., Biak, Dutch New Guinea.
ZD8DT—Box 89, Zomba, Nyasaland.
CN8JO—C/o. U.S.A.F. QSL Service, Box 7388, A.P.O. 116, New York.
I5RAM—Box 179, Magadiscio, Italian Somaliland.
AP2AD—Box 4074, Karachi, Pakistan.
YN1BW—C/o. American Embassy, Managua, Nicaragua.
ZC3AC—V. E. Mathew, Christmas Island, C/o. G.P.O., Singapore.
Ex-VS6CW—Via GW3IVS.

ACTIVITIES

3.5 Mc. The only report came from Dave **WIA-L3039**: W7MSB (0855z), **ZK1BG**.

7 Mc. Frank **2QL** reports JA, and Laurie **2AMB** mentions VR1B* (Tarawa Island), ZS6ANI*, ZS6AEA* (1800z), and YU, LU3JRM, VE7AQ DU7SV, UF6KPA. Neville **2AFL** worked JA3MC* (c.w.) and heard JA7GW on phone. Dave **3ADW** talked to JA1BMY*. **WIA-L3039** heard JA1BU and JA6CX. **Rod de Balfour** mentions Wa on phone.

14 Mc., C.W.: **2QL**: VK1RW*, YJ1RF*, I5RAM, 9S4AZ, FE8AE, FE8AG, ST2NG, ZS7C, VQ5GC, FL8AB, ZD3D, PZ1AM, 5A2FB, OY2S, UL7CB, UR2KAA, UG6AB, UD6BM, VP8BW. **2AIR**: PY1HQ*, VR3B*, GI4RY*, G*, ON*, DL*, UA*, UB*, CE7DJ*, LU3EL*, CT*, KP4*, CE3-RE*, 4X4IV*, GM*, XE*, VR4AA*, EI9Y*, VP9BM*, FM7WD*, EA*, LA*, SM*, YU*, YJ1AA*, YV*, EA9DF*, CO*, PJ2CE*, VP2Y*, CN2AY*, UA1KAE*, ZD8BX*, VP8GT*, FA*, TI2PZ*, CN2RV*, KZ5KW*, CE0AC*, PJ1AN*, LU* **2AMB**: YU*, ON*, YP4AO*, PY1RW*, PY2BC*, DL*, VP7NS*, VS6*, 2S4AX*, VR4AA*, VP8BW*, KP4*, PZ1AH*, FG7XC*, FG7XD*, VE3OJ*, VK1RW*, VK1GA*, XE*, LU*, VQ4-DT*, ZS*, and GI, ZD9AC, ZS9P, VQ2IE, ZS7C, ZE8JY CR6CZ, DU3DO, LU0AC, KC4USV, HK9WP, CX1BZ, CX2CO, LA, KG1AG, CT, EI9Y, EA, VP7NM, YV1AD, BV1US, FL8AB, UF6AM, FB8BR, OX3LD, 4X4DE, YV5BJ, VQ-8AB, YJ1RF, AC3SQ, HB1MX/HE, VP9Y, HC-1LE, LU. **Bud 2AQJ**: DL*, DU*, F*, FO8AO*, G*, GM*, HB*, JA*, KL7*, OE*, OH*, OZ*, PA0AY*, SM*, UA0AA*, YJ1AA*, 4X4GC*. **3ADW**: ZS9P John 5HI 3V8AO*, UB5KAG*, TI2PZ*, LZ1KNB*, 9S4AX*, UB5KMA*, UB5-WF*, UC2KAB*, XE*, SM*, YO5LC*, HA5KBR*, GM* ZB1BX*, YU*, UA0KCA*, UH8KAA*, VQ4DT* Ray 5RK: LU2DRM*, LU5AQ* Austin 6WO 3W8AA*, VK1RW*, VQ8AD*, FB8-BR* Eric BERS185 BV1US, AP2AD, CE3ZO, EA9AP, CX2CO, G7PAZ (ship), IS1FIC, I5RAM, KC4USV, KG1AG, LU, OX3LD, UI8KAA, UD6-BM, UC2KBA, UO5KBB, VK1RW, VE2ACW/8, VP8BW, VP8CX, VQ8AB, VQ8AD, VQ8AG, XE, VR3B, YV3AN, ZC3AC, YJ1RF, ZS, YA1AM, 9S4DE, ZC4NS. **WIA-L3039**: YV5HL, G. **Rod de Balfour**: JA, PZ, BS. **3AHH**: PA0*, DL*, O*, EA*.

14 Mc. A.M.: **2AMB**: PA0*, TI2OE*, EA*, CE3HL*, LU*, VR4AA*, OZ*, SM*. FU8AC*, GW*, F*, VP9BM*, 4X4HK*, I*, HB9*, DL*, CN8MM*, HB1MX/HE*, YN1AP*, and OA3G, BV1US, OQ5FQ, FB8BB, HP3MP, HC1ES, EA-9AP, ZM6AS YN1RA, SM, ZS, ZS2MI, FB8ZZ, VP9FL. YV5BV, LU, YJ1RF, CX2AX, CR7DI, CR7AH, PY5JU, HH1HB, CN8HN, OE, VK1DA, CR6BI, CR6SA. **2AQJ**: DL*, EA*, HC1ES*, KA*, VR4AA*, ZS*, 4X4DK* Neil 5HG: VP9BM*, JZ0ADM*, CR5SP*, UQ2AN*, EL2F* **3ADW**, CT2AH*, VP9BM*, YV3AO*, TI2JA*, HP3MP*, VP5AO*, HC1ES*, PY1MK*, ZS*, FB8BC*, VE3MO*, SM*, ET2US* John **3AGD** CO2VM*, VS2*, XE*, PA0*, JZ0ADM*, LA*, and ZM6AF, ZD6DT, YK1AA, YO3VI. Bruce **3AGG** FB8BP*, OQ5FH*, ZM6*, G* KZ5*, SM*, KL7*, CN8*, OZ*, EA*, HP*, LU*, PY*, HC*, YV*. Bram **5AB**: DL*, G*, VP9CY*, JA*, KA*, OH*, ZB2I*, F*, DU*, PA0*, I*, EI4Q*, SM*, EA*, YN4AT*, YN1AP*, YS1MS*, HB1MX/HE*, LA*, OZ*, CX1VD*, ZS2MI*, LU*, CR7DU*, ZE*, ZS6I*, PY4PI*, CO*, YV*, OQ5FH*, ON*, ZB1BG*, HK3PC*, HK3HY*, OY9A*, ZE6JJ*, ET2US*, CN8AS*, FM7WQ* **5HI** DL*, OE*, F*, G*, GM*, ON*, OA4FA* Ian **WIA-L3007**: ZS9O, ZS6I, ZS2MI, VQ4FH, YS1MS. **Rod de Balfour**: F, GM, GW, G, CT, I, HB9, LA, SM, EA, DL, KV4BI, CO, CM, TI2RS, YN1AP, HP3FL, HP1EH, HC1ES, LU, ZP5CF, PY2CK, KP4, VO6D, YJ1RF, ZM6AR, ZM6AS, JA, DU, FU8AC, VR4AA, JZ0ADM, 4S7YL, AP2AB, and VU2DE.

21 Mc. 2QL: ZD6BX*, LZ1KNB*, YU*, OY-7ML*, ZS7C*, ZS*, UA1KAE*, UC2KAB*, FA-8RJ*, VU, KP4, KP4CC*, 4X4BD*, 4X4BX*, 3V8AO, VQ4DT, XW8AB, SP1KAA, HB1MX/HE. **2AFL**: LU*, KV4BB*, G*, ON* **3HG**: ZS*, G*, EA*, ZP5ET*, CE3DY*, GD6LA*, PY*, CE3II*, TG9US*, 4X4BX*, GM*, PY7AEI*, EI9Q*, JZ0ACK*, VP2GC*, VP6GT*, OD5AV*. Jack **3JA**: VP8BP*, CE*, PY*, DL*, ZS* **3ADW**: GM*, CT*, BV1US*, G* ZE*, ZS*, LU*, JZ0-ACK*, PY*, CE* Len **5ALD**: JZ0ACK*, VS2*. **5AB**: DL*, JA*, G*, HB9*, DJ*, CN8FF*, TG-9JW*, FB8BZ*, 5A1TA*, LX1SI*, GC5FQ*, F*, ZS* HB1MX/HE*, VQ4DT*, KP4AZ*, GD3-GMH*, OH*, ZP5CF* TI2BX*, KL7*, ON*, CE-3II*, YN1HF*, FO8AO*, JZ0ACK*, KZ5TV*, CR9AL*, CR9AK*, CE3CZ*, TG9US*, GW*, 5V0WT*, G2ACT/M*, VS4NW*, LX1DC* 5WO* VP5EM*, GM*, G*, DL*, PA0*, GD3GMH*, ZS*. Col 7LZ: G*, ZP5CF*, CE1AH*, CE1AJ*, LU*, PY5DK*, VS2*, EA*, ZS* **Rod de Balfour**: G, GM, GW, F, CT, PA0, I, OH, LA, JA, DL, EA, ZK1BS, BV1US, 4S7YL, VS4BO, ZS7C, ZS, VQ-4ERR, CE1AJ, CE1AH, CE3RN, PY5DK, LU-8DAH, KL7AZN, XE2KW.

27/28 Mc. C.W.: **2QL** keyed with VS6DE*, DM2AEN*, ZD6BX*, OQ5RU*, KH6AO*, JA*. **5HI** reports ZD6RM*.

27/28 Mc. A.M. **3HG** spoke to GD3FOC*, OH5NW*, OH2OV*, G*, CT1HB*, VE*, I1TDJ*, ZS6LF*, ZS3B* LU2MT*, ZS6AJB*, TG9JW*, KA2DS*, ZS6UN*, ZS6QP*, ZS3BC*, G3HSN*, VS2DQ*, ZS1W*, ZS6AJV*, ZD6RM*, JA3AH*, DL1LP*, ZS2KC*. **3ADW** mentions VE*, 4S7*, OH4NT*, PA0*, OE*, GM*, ZS* Les **4XJ** contributes this nice list ZS6ZK*, ZS5CM, ZS6LF*, ZS1W*, ZS6SA*, ZS1DO*, 4X4FQ*, DL7FU*, I1DV*, EA3JR*, EA3IT*, GW3UO*, G3HSN*, VE*, JA*, 4S7YL*, HC1KV*, HP1BR*, LU8DDI*, LU9DM*, LU7AR*, LU1HAV*, LU4CC*, YN-4CB*. **5HI** adds KA3KA*, KH6*, ZS6OV*, ZS-5LX*, ZS6ZK*, ZS5DS*, VE7* 7LZ worked 4S7WM* **Rod de Balfour** heard KH6, JA9BE, BV1US, 4S7YL G2CDI, F9LE, KZ5KY

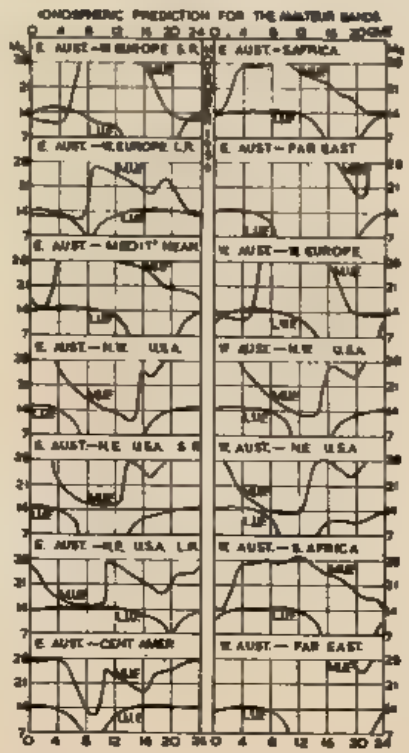
27/28 Mc. S.S.B.: Charles Thorpe reports the following s.s.b. DX stations: W6HHU, W6FCK, W4WSJ, W8NLC, W8DSX, W8MMD, W4BUZ, K6FE, K0APG, W0GVO.

Rare QSLs were received by: **HIL** CE0AD, BV1US, IS1FIC, I1TITAI, CE3AG (7 Mc.), YN-1PM. **2AMB** CE0AD, 4X4DF (7 Mc.), I7ITAI (7 Mc.), YN1AP, VP1JH, CE4AD, CE4CY, CE-3AG. **3HG** VP6BE. **7LZ**: BV1US. **BERS196**: I5AAW, ZE6JU, ZS5RE. **Rod de Balfour**: CN-8JO, GW4CC, VQ6CB, XZ2SS, VP1EK, VP9AK. **5AHH** DL9CI/LUX.

Thanks to W6YY, the Northern California DX Club, VKs 2QL (QSP 2AIR), 2AMB, 2APL, 2AQJ, 3HG, 3JA, 3ADW, 3AGD, 3AGG, 3ALD, 4XJ, 5AB, 5RK (QSP 5HI), 6WO, and BERS-196, WIA-L3007, WIA-L3039, Rod de Balfour (QSP 7LZ), Charles Thorpe.

† Hans J. Albrecht, 10 Belgravia Ave., Box Hill North, E.12, Vic.
* Call signs and prefixes worked.
z = zero time—G.M.T

PREDICTION CHART FOR NOV., '56



EA, DL, KV4BI, CO, CM, TI2RS, YN1AP, HP3FL, HP1EH, HC1ES, LU, ZP5CF, PY2CK, KP4, VO6D, YJ1RF, ZM6AR, ZM6AS, JA, DU, FU8AC, VR4AA, JZ0ADM, 4S7YL, AP2AB, and VU2DE.

21 Mc. 2QL ZD6BX*, LZ1KNB*, YU*, OY-7ML*, ZS7C*, ZS*, UA1KAE*, UC2KAB*, FA-8RJ*, VU, KP4, KP4CC*, 4X4BD*, 4X4BX*, 3V8AO, VQ4DT, XW8AB, SP1KAA, HB1MX/HE. **2AFL**: LU*, KV4BB*, G*, ON* **3HG** ZS*, G*, EA*, ZP5ET*, CE3DY*, GD6LA*, PY*, CE3II*, TG9US*, 4X4BX*, GM*, PY7AEI*, EI9Q*, JZ0ACK*, VP2GC*, VP6GT*, OD5AV*. Jack **3JA**: VP8BP*, CE*, PY*, DL*, ZS* **3ADW**: GM*, CT*, BV1US*, G* ZE*, ZS*, LU*, JZ0-ACK*, PY*, CE* Len **5ALD** JZ0ACK*, VS2*. **5AB** DL*, JA*, G*, HB9*, DJ*, CN8FF*, TG-9JW*, FB8BZ*, 5A1TA*, LX1SI*, GC5FQ*, F*, ZS* HB1MX/HE*, VQ4DT*, KP4AZ*, GD3-GMH*, OH*, ZP5CF* TI2BX*, KL7*, ON*, CE-3II*, YN1HF*, FO8AO*, JZ0ACK*, KZ5TV*, CR9AL*, CR9AK*, CE3CZ*, TG9US*, GW*, 5V0WT*, G2ACT/M*, VS4NW*, LX1DC* 5WO* VP5EM*, GM*, G*, DL*, PA0*, GD3GMH*, ZS*. Col 7LZ: G*, ZP5CF*, CE1AH*, CE1AJ*, LU*, PY5DK*, VS2*, EA*, ZS* **Rod de Balfour**: G, GM, GW, F, CT, PA0, I, OH, LA, JA, DL, EA, ZK1BS, BV1US, 4S7YL, VS4BO, ZS7C, ZS, VQ-4ERR, CE1AJ, CE1AH, CE3RN, PY5DK, LU-8DAH, KL7AZN, XE2KW.

27/28 Mc. C.W.: **2QL** keyed with VS6DE*, DM2AEN*, ZD6BX*, OQ5RU*, KH6AO*, JA*. **5HI** reports ZD6RM*.

27/28 Mc. A.M. **3HG** spoke to GD3FOC*, OH5NW*, OH2OV*, G*, CT1HB*, VE*, I1TDJ*, ZS6LF*, ZS3B* LU2MT*, ZS6AJB*, TG9JW*, KA2DS*, ZS6UN*, ZS6QP*, ZS3BC*, G3HSN*, VS2DQ*, ZS1W*, ZS6AJV*, ZD6RM*, JA3AH*, DL1LP*, ZS2KC*. **3ADW** mentions VE*, 4S7*, OH4NT*, PA0*, OE*, GM*, ZS* Les **4XJ** contributes this nice list ZS6ZK*, ZS5CM, ZS6LF*, ZS1W*, ZS6SA*, ZS1DO*, 4X4FQ*, DL7FU*, I1DV*, EA3JR*, EA3IT*, GW3UO*, G3HSN*, VE*, JA*, 4S7YL*, HC1KV*, HP1BR*, LU8DDI*, LU9DM*, LU7AR*, LU1HAV*, LU4CC*, YN-4CB*. **5HI** adds KA3KA*, KH6*, ZS6OV*, ZS-5LX*, ZS6ZK*, ZS5DS*, VE7* 7LZ worked 4S7WM* **Rod de Balfour** heard KH6, JA9BE, BV1US, 4S7YL G2CDI, F9LE, KZ5KY

27/28 Mc. S.S.B.: Charles Thorpe reports the following s.s.b. DX stations: W6HHU, W6FCK, W4WSJ, W8NLC, W8DSX, W8MMD, W4BUZ, K6FE, K0APG, W0GVO.

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Thanks to W6YY, the Northern California DX Club, VKs 2QL (QSP 2AIR), 2AMB, 2APL, 2AQJ, 3HG, 3JA, 3ADW, 3AGD, 3AGG, 3ALD, 4XJ, 5AB, 5RK (QSP 5HI), 6WO, and BERS-196, WIA-L3007, WIA-L3039, Rod de Balfour (QSP 7LZ), Charles Thorpe.

FEDERAL, QSL, and DIVISIONAL NOTES

FEDERAL

EMERGENCY CO-OPERATION IN GREAT BRITAIN

An interesting note from overseas is the announcement by the Council of the R.S.G.B. that the Post Office has approved the co-operation of the Radio Emergency Network with the British Red Cross Society in its disaster relief operations when the Post Office telephone network in the vicinity of a disaster is congested or disrupted, and also in relief exercises run by the Red Cross.

The necessary amendments to the Amateur licence to permit the passing of third party messages on behalf of the Red Cross in actual emergencies, and in exercises, are being made by the Post Office.

INTERNATIONAL GEOPHYSICAL YEAR

The following letter has been received from the A.R.R.L. in regard to activities by Amateurs concerning the coming v.h.f. research programme in connection with the International Geophysical Year.

It is pleasing to record that the Institute is well prepared in this regard and the Convenor, Professor Webster, of the Queensland University, already has lists of names of those Amateurs willing to help. Any other Amateurs who would be willing to take part in this most interesting programme are asked to notify Divisional Secretaries.

"During 1957 and 1958, A.R.R.L. is planning to carry on a programme of research dealing with v.h.f. propagation. This work is to be done in connection with the International Geophysical Year. The project offers a great opportunity to enhance the reputation of Amateur Radio in scientific circles, while also making a real contribution to the I.G.Y.

"Since there will undoubtedly be a great deal of long-range communication on the 50 Mc. band during this interesting part of the sunspot cycle, observations in no one nation will be sufficient to tell the whole story. Therefore, we wish to invite Amateurs in all the I.A.R.U. countries to join in contributing to the project. The work will involve sending in reports of stations contacted or heard on the v.h.f's. Emphasis will be on trans-equatorial scatter, sporadic-E skip, and auroral reflection, although we are interested in any communications which are at all out of the ordinary.

"Data from all countries is needed to fill in the gaps in the propagation picture. Central and South American Amateurs will be of special help in the transequatorial phase of the programme. Even Amateurs in places where 50 Mc. operation is not sanctioned can assist by sending in heard reports.

"What is needed from you is as much publicity for this programme in your country as possible. We hope to contact the leading v.h.f. operators around the world directly a bit later on, but it is appropriate that the initial announcement should come through the I.A.R.U. publications. All interested Amateurs are invited to get in touch with the I.G.Y. office here at A.R.R.L. Headquarters, so that we can send them detailed information on the project as it becomes available.—Mason P. Southworth, W1VLH, A.R.R.L.-I.G.Y. Project Co-ordinator."

FEDERAL QSL BUREAU

The Irish Radio Transmitters' Society advises that the new address of their QSL Bureau is Mr. J. Corcoran, EI5M, 104 Collins Ave., Whitehall, Dublin, Eire.

The I.R.T.S. draw attention to the fact that EI calls do not include the numeral 1 or the letter O. Calls containing either of these are illegal.

The Singapore Amateur Radio Transmitters' Society now give the address of their QSL Bureau as' Box 2394, Singapore.

Alan McLoud, VK3AHM, apropos of 3W8AA QSLs, states he has received two QSLs for separate contacts. Alan advises routing of cards to 3W8AA via Hong Kong and Canton.

I5AAW, located at Bender Beila, 600 miles N.E. of Mogadiscio, Italian Somaliland, is operated by Carlo Bostaloni (ex-I1AAW). He uses a BC610 tx with an input of 600 watts, and a BC312 rx. Carlos QSLs all contacts and s.w.l. reports and has worked numerous VK stations. He solicits cards direct to him at Box 85, Mogadiscio, Italian Somaliland, East Africa.

BERS198, in a screed bemoaning a spell of wet weather whilst he was in VK5, suddenly remembered that was his native land, and wasted several additional lines endeavouring to square off for the VK5 climate. Treb, during September, received the following rare cards. MP4QAL/Qatar, YA1AM, VS4BA and CE0AD, bringing his score to 229 confirmed. Gripes me to hear of it as the latter two stations have owed me QSLs for nigh on two years.

Ray Jones, VK2RJ, QSL Manager

NEW SOUTH WALES

The September meeting of the N.S.W. Div. was fortunate to have Mr John Moyle, 2JU, as its lecturer. John gave a most interesting account of his recent overseas trip and illustrated his talk with an excellent selection of colour slides. Members present enjoyed John's talk and appreciated his action in sharing some of the highlights of his trip with the meeting.

The big news for this month has been the South Western Zone Convention at Griffith, and the Hunter Branch Blackalls Field Day, held on the same week-end. Both will be fully reported later in these notes.

At the time of writing the Division's official station at Dural is nearing completion, at least as far as the building is concerned. There have now been two working parties on the roof construction, and all should soon be ready for the tiling. First priority will then be given to the installation of 2WI's transmitters.

Members were saddened recently to hear of the death of Bill Felton, VK2RF. An active member of the Division for many years, Bill will be sadly missed by his many friends. Our sympathy is extended to his family in their sad loss.

In a very interesting letter written at Penang in Malaya, Greg VK1ANP passes along the news from that corner of the globe. Greg has been active from Hong Kong as VS6DM and contacted Horrie 2FA and George 2AUR. VS6BE, who is very well known to VK2s has a very nice set-up, which Greg describes as a dream. 7SA4 and KWSI, which apparently has OK of local authorities! A frequent visitor to Hong Kong is Kurt Carlsen, of Flying Enterprise fame. Greg describes the dog-pile that resulted when he persuaded ZC5SF (normally c.w.) to try phone. The whole world came back to a CQ VK2—New South Wales must be growing' Contact was made from here with 2FA and 2AJZ. Greg expects to return to Sydney in November and is looking forward to renewing old acquaintances at the November meeting.

HUNTER BRANCH

The September meeting of the Hunter Branch was held at the University of Technology, Newcastle, with President Bill Hall chairing the meeting. Present were 18 Amateurs, 4 Associates and one Visitor and the Lecturers for the night were Frank 2FX and Harry 2AFX, describing and demonstrating a c.r.o. which they had constructed.

Among new faces at the meeting were Bob 2AQR, Bill 2ZL and his friend, Bill McKay. Les Baber, who now holds the call 2ZCB, made the trip down from Scone, and Chris. 2PZ put in an appearance from Cessnock. Rodney Prout has now passed the full ticket and is sporting the call of 2CN. President Bill 2XT had teeth removed during the month and is now known as the "Toothless Terror." Dave 2BZ has succumbed to the lure of the "one-eyed monster" and has found that all household chores stop till the t.v. session ends. Leo 2QB will only be heard at week-ends for quite some time in the future as he is studying and receiving tuition five nights per week to further his education for a pass in the Leaving Certificate, best of luck, Leo. Hon 2ASJ and Syd Daniels have returned from VK5 none the worse for the journey; they also managed to remain single.

Listen for 2AWX each Monday night at 8 p.m. around 14140 Kc. for latest news on the Hunter Branch activities.

SILENT KEY

It is with deep regret that we record the passing of:—

VK2RF—Bill Felton.

SOUTH WEST ZONE

The main news this month is regarding this Zone's Fourth Annual Convention held at Griffith. Approx. 85 Amateurs, XYLs, YLs and harmonics attended. Visitors came from Sydney, Tumut, Wagga, Albury, Melbourne, Bendigo, Hillston, Hay, Uranquinty, and Coolamon. The success of the Convention was due to the organising ability of Stewart 2PL, ably assisted by members of the Griffith Radio Club, and their ladies. Proceedings were commenced at 2 p.m. with a bus' tour of Griffith and district where places of interest were described by Assoc. Laurie Ashton of Griffith. Arriving back at the I.O.O.F Hall, at which the Convention was held, afternoon tea was served by the ladies and other helpers. Short addresses were then given by attending Council members. Ragchewing was then indulged in until dinner, which was served in the Presbyterian Hall by the Presbyterian Ladies' Guild.

With the inner man fully satisfied, zone officer Jim 3AJO, who occupied the chair, welcomed the visitors and congratulated the Griffith boys on the great job of organising they had done. The chairman then called on the President of the N.S.W. Div., Jim Corbin, M.B.E., to officially open the Convention. Jim did so in his usual efficient manner. Stewart 2PL endorsed the President's remarks most ably and extended his thanks to all his helpers, not forgetting his secretary, Lyla (Mrs. 2PL).

The gathering then returned to the I.O.O.F. Hall where several competitions were held. Later we were entertained by Mr. Harry James, magician. Films were then shown by Alf 2BW, the audience being much appreciative of Alf's films. Supper was then served.

Sunday morning commenced with the Scramble on 40 mx, which started at 8 and finished at 10.30 a.m. Next event held was the 144 Mc. Tx Hunt. While this was going on the official 2WI broadcast was done by Jim Corbin from Stewart 2PL's shack. After lunch all returned to the Hall where the usual auction of disposals gear was held; needless to say bargains galore were snapped up. Next event was the Blindfold Tx Hunt in which both ladies and gents participated; much amusement was caused with this event. Afternoon tea was then served and a final ragchew and goodbyes were exchanged by some who had to head for home. Those who remained were entertained in the evening by films, Eric Clare being the operator.

Results of Competitions: 40 Mx Scramble: 1st 2RS, 2nd 2VC, 3rd 2AJO, 4th 2AGJ. 144 Tx Hunt 1st 2VC, 2nd 2PN, 3rd 2AJO, 4th 2ZAA. Blindfold Tx Hunt: Gents—1st 2ACS, Ladies—1st Mrs. Arnisen.

We have again seen a really successful South Western Zone Convention, and as zone officer, I am proud of my fellow Amateurs and their lady helpers for the efforts they put into their work to make each Convention the success they have all been in the zone. Also many thanks to our visitors who travel such long distances to our Conventions. Without your attendance we would be unable to make a success of our functions. Thanks very much to you all.—2AJO.

HUNTER BRANCH CONVENTION, BLACKALLS PARK

This Convention held over Labour Day week-end, was the fifth conducted by the Hunter Branch. Previously conducted as a Field Day, this year it took the form of a Convention as it will each year in the future.

Activities commenced at 3.30 p.m. on Saturday, 29th Sept., with 38 OMs and 3 YFs present. President Bill Hall welcomed those present to the Convention and handed over to Perce 2APQ, who introduced members of the V.h.f. Group who had journeyed from Sydney to be present. Don 3PO lectured on construction methods in VK3 and stressed the importance of antennae in v.h.f. work; Vic 2VL described his walkie-talkie, John 2ZAV explained the most interesting points of his v h.f. tx; Ken 2ANU demonstrated his grid dip osc, and showed its tuning range, Geoff ("Paint Pot") Partridge gave some interesting information on power supplies for ATR2Bs, Perce 2APQ also described his g.d.o. of unique design and demonstrated his v.h.f. walkie-talkie with its dipole constructed of flexible steel tape; Doug 2ADS, Hunter Branch liaison officer (v.h.f.), thanked the V.h.f. Group boys for their attendance. Tea break was from 5.30 to 7.30 p.m. and, thanks to the efforts of the ladies' committee, anyone who so desired was provided with an abundance of eats and numerous cups of tea.

At 7.30 p.m. 40 OMs, 12 YFs and numerous children assembled in the hall to hear John 2JU give a talk on his impressions of his recent world tour. John illustrated his talk with numerous transparencies taken on the tour, and played a record of experiments using a sound synthesizer and all present expressed their appreciation at being able to hear this astounding recording which he had brought back from "Stateside."

The activities on Sunday, 30th, commenced at 9 a.m. with a 144 Mc. Tx Hunt. Les 2AOR provided the tx, ably assisted by Neil 2XY, and they journeyed to the location selected by Lionel 2CS. Les and Neil started the tx and settled down with the Sunday papers, waiting to be found. The location was five miles in a direct line from Blackalls, but it was on the other side of the lake and necessitated a trip of 16¾ miles to arrive at the site. Harold 2AHA, with assistant Norm 2ANA, arrived first, taking just one hour to find the tx, ten minutes later Bill 2XT and driver Ray James arrived, a further ten minutes later Dick 2ZCF showed up, next in was Eric 2AFM, and later John 2ZAV and Perce 2APQ.

The Hunter Branch Scramble commenced at 11.30 a.m. and went until 12.30 p.m. with a number of stations operating. Bill 2AWG was the winner, 144 Mc. contacts helping him. Harold 2AHA was runner-up. After the luncheon adjournment, sports were held for young and old, results being as follows: Girls' Race—Merilyn White 1, Patricia Healy 2, Diane Davies 3. Boys up to 12—M. Meyers 1, R. Cairns 2, N. Hugg 3. Boys 12-14—J. Gray 1, C. Myers 2, P. Davies 3. Ladies' Race—Mrs. Cairns 1, Mrs. Whyte 2, Mrs. Hall 3. Men's Race—Crieff 2XO 1, Les 2AOR 2, Bill 2XT 3. Nail-driving—Ladies, Miss Bailey, Men—Ben 2ABT.

For the Blindfold Hidden Tx Hunt, Les and Neil set up the tx in some scrub 150 yards from the start with numerous trees, bushes, long grass and parked cars in between. The contestants, suitably blindfolded and with a guide to protect them from injury, were turned loose. Three heats were run for OMs, the winner being Crieff 2XO with Perce 2APQ as runner-up. In the ladies' section, the winner was Joyce Whyte with Mrs. Bailey as runner-up.

The prizegiving was at 5 p.m. and, although we were pleased to see local boys take first and second prize in the 144 Mc. hunt, we were very pleased to see Bill 2AWG and Crieff 2XO from Coff's Harbour, and Benn ("Nulla Nulla") 2ABT from Coonabarabran take out some of the prizes. Others who travelled long distances to be present were 2GV from Scone, 2ANY from Muswellbrook and 2VU from Singleton.

A complete list of those attending is as follows: 2WQ, 2AWG, 2PY, 2XT and family, 2ARV and family, 2ZL, 2ABT, 2AQR, 2APQ and family, 2ZAV, 2GV, 2KF and family, 2QB, 2VU, 2ANU, 2VL, 2KQ, 2AOR and family, 2XY and family, 2ANA and family, 2APA, 2ZDL, 2AHT, 2ADS, 2AUH, 2CS and family, 2AGY and family, 2JU, 2AFM and family, 2BF and family, 2BZ and family, 2ON, 2AQ, 2GE, 2ZCF, 2PZ, 2ASA and family, and Associates H. Miller, R. Bailey and family, G. Sutherland, K. Archbold, J. Pontesmuler, N. Conners, Allan Bell, L. Hawkins, N. Otley.

TAMWORTH

An interesting sidelight this month was a visit from Mick 4ZAA and Ross 4ZAT, who heard 2APF in Tamworth from the top of the Moonbi Ranges during their journey. These lads are on their way to VK3 land and will have many interesting contacts during their trip.

Tamworth has again increased its Amateur ranks by the addition of Dennis Wheaton, ex-2ZAW, who is now living in Tamworth, and has recently taken the morse and was successful. Dennis has just acquired an XYL and obviously it will be some time before we hear him on the air, although he is very keen to get on. Sam 2LY is giving 40 and 80 mx quite a hiding, and now his log is starting to look like an Amateur station log. Sam is also active again on 2 mx. Noel 2ASQ is hard at work constructing the mast and supporting frame for his G4ZU array and has it well under way. Merv 2ATD is now on 2 mx consistently and should not be long before we hear him on the d.c. bands as well. All in Tamworth extend their deepest sympathy to Tex 2KX in the recent loss of his father.

2MF in Armidale is, at this date, enjoying a well earned holiday and has had several weeks at Coolangatta. Bob 2BS, on a tour of N.S.W. and Qld., is, at the time of writing, enjoying a stay at 4HD's QTH. Bob tells me he has had a very nice time on his trip so far.

COALFIELDS AND LAKES

Activity in this zone still very slight, maybe the warmer weather and nights will bring some of the boys out of winter haunts. Bob 2KF has been active on 28 Mc. Heard an old-timer, 2ZL, putting out good 7 Mc. phone. Geoff 2VU is again on 2 mx, putting in good signals here. Major 2RU is only one heard from Gosford area, he works most bands. Alex 2JZ was active during the VK-ZL Contest. An ex-zone station, 2ADT was worked while mobile at his Urunga week-ender. Conditions have been quite good at writer's QTH 7, 14, 21 and 28 Mc. being worked regularly and 2 mx when anything shows up. Any notes from zone stations would be appreciated by 2YL by end of each month for inclusion in these notes.

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VICTORIA

Approximately sixty were present to hear and view one of the most brilliant lectures we've ever had at the W.I.A., given at the general meeting last month by Commander Batterham, of the R.A.N., on the Navy's Frogmen work. One and all of those who attended considered themselves most fortunate to have the opportunity to hear this wonderful lecture and were full of praise of the Hon. Secretary, 3YS, for arranging it. It was a delightfully told story and kept you enthralled from beginning to end. His description of the heroism and daring of the frogmen left you breathless with amazement and then the next moment his very charming and subtle sense of humour had you in riots of laughter. He also showed us two very excellent and most amazing films, taken under water, of frogmen in action. Our thanks go to Commander Batterham for a very wonderful and interesting evening.

We had a visitor from VK2 at the meeting; he was Les 2ZBJ. The following were welcomed as associate members of the Institute: Messrs. A. J. Fisher, M. J. Swindon and L. M. Stone.

Council is pleased to announce that it has decided to award the Gadsden Trophy to Ron 3RN in recognition of his excellent and untiring efforts on behalf of the publication of "Amateur Radio," the W.I.A. magazine, for the past 10 years and his association with the earlier duplicator-produced issue. Congratulations of members are extended to Ron on being awarded this coveted prize, an honour he richly deserves.

Council is anxious to find someone who would be willing to act as membership secretary for the Victorian Division and would be pleased to hear from anyone who might be in a position to help out in this regard.

The State Convention is scheduled to be held at Leongatha on the week-end of 3rd and 4th November. The Convention will commence with a dinner at 6 p.m. to be held in the old Council Chambers and followed by the meeting at 8 p.m. Arrangements can be made for the ladies to attend the local picture theatre during the meeting. Sunday's entertainment will include an inspection of the local butter and cheese factory in the morning; this factory is the most modern of its kind in VK. A Tx Hunt or Fox Hunt will probably be held in the afternoon. If you have not already booked your accommodation, then contact Ron Jardine, VK3PR, 8 Blackmore Ave., Leongatha, immediately and please enclose 10/- deposit for each booking.

The seventh round of the Bi-Monthly All-Band Scramble was held on the second Monday in October. There was a fair amount of activity on the bands but, as usual, mostly from the v.h.f. operators. The result of the previous scramble, the sixth edition, is as follows: Section C, equal first—3YS and 2ZAQ, both with 10 points.

The Annual Victorian Division W.I.A. Dinner will this year be known as the Olympic Dinner and will be held at the Prince of Wales Hotel, Fitzroy Street, St. Kilda, on Friday, 16th November, at 6.30 p.m. The dinner this year, being held in the Olympic year, will be a very special event and we are expecting to have many overseas visitors and also several distinguished guests who will be interested to meet as many Amateurs as possible. On this very important occasion the Victorian Division requests you to make a very special effort to be present. Tickets are available from the Administrative Secretary, priced 27/6 each.

During the past month we had a visitor from Norway here in Melbourne. He was Jimmy LA6CF who spent a couple of days meeting VK3 Amateurs while his ship, the "Tourcoing," was berthed at Port Melbourne. The very newest in grandparents are the 3JDs, Jack and Phyl Davies. Their daughter Barbara has a small son.

Call books and log books are still available from the Victorian Division office, priced 4/6 a copy. Please add postage if you desire a copy posted to you. 6d. extra for call books and 9d. extra for log books.

Members are advised that Mrs. May, Administrative Secretary, will, in future, be in attendance at the rooms, 191 Queen Street, Monday to Friday from 9 a.m. to 4.30 p.m.

At a recent S.w.l. Group meeting, Fred 3YS spoke to members regarding operation of Amateur Radio tx's. He explained how the P.M.G's. Department was waging an unceasing war against illegal operation and made clear the dangers of participating in such operation. He also stressed the necessity of consideration which should be given beforehand to all remarks which are made over the air. If you have the opportunity of speaking to another person via Amateur Radio, be very careful in your choice of remarks. Remember you could cause trouble for yourself and also for the owner of the station. Also, if you hear of anyone attempting or considering to attempt putting an illegal tx on the air, do your best to dissuade them. No matter how keen a person is, it is always better to do the right thing by the Amateur fraternity, the community, and yourself by studying to obtain your A.O.C.P. than to "pirate." [Have you read the Editorial yet?—Ed.]

At the next general meeting, to be held on Wednesday, 7th November, Maurie Anderson, 3AMA will give an illustrated talk on his recent trip to the Northern Territory and Alice Springs. Maurie, who was an operator for the Inland Mission, made the trip to be present at the opening of the John Flynn Memorial Church.

80 METRE TRANSMITTER HUNT

80 mx tx hunters were again very fortunate in having a lovely sunny afternoon for their hunt. Another record crowd turned up, over fifty there were, and all enjoyed the spot chosen by Tom 3AOG who hid the tx. It was down at the beach at Rickett's Point, an ideal spot for such a lovely day. At first it seemed as though the tx was going to win this hunt as the location apparently played tricks with the signal and sent everybody off in a northerly direction, when actually the location was due south. All bar one had to open their envelopes to get at least a bearing, but once they had the bearing, they were soon able to get back on to the track of the signal again. The only one who made the location unaided even by a bearing was Reg 3ZAD, who of course was the winner.

At the conclusion of the hunt we all gathered around a fire to cook chops in the flames, potatoes in the ashes and make toast on the end of a long stick. We got a bit sooty, but we had a lot of fun, and never have chops tasted better. How about coming along and joining in the next hunt? We can guarantee you'll enjoy it! Bring the family and friends and a picnic tea. Dates are advertised over 3WI broadcasts each Sunday morning. Make a special effort to come along to the Olympic Tx Hunt to be held on 25th November when we are expecting to have many very special visitors with us.

SOUTH WESTERN ZONE

The zone is still holding its activity, particularly the Sunday morning hook-ups at 1000 hours on 7.050 Mc. We get a good muster from the Geelong boys now, but would like to have someone from Ballarat, there are plenty of you up there, so how about it, chaps? John Beames, from Ballarat is now 3ZDM and hopes to be on by now, so there is another 144 Mc. station on the band. We wish you plenty of QSOs John. Whilst on Ballarat, the zone and all members would like to thank Bob 3GR for all his excellent work in organising the convention; it is not as easy as some think. Harry 3XI still going hot and strong on the DX; now on 21 Mc., using a cubical quad and working 100 per cent. Norm 3EQ has got the rig working f.b., remote control from the lounge, also has new cubical quad for 21 Mc.

Dan 3ADD at Hamilton is a new member to our zone, and is on the hook-ups on Sunday mornings; we wish you all the best whilst in our zone, Dan. John 3ARJ visited Bill Wines' QTH for an evening, complete with portable rig, but Bill's XYL and John were too busy talking their school days over. Cec 3YW will be back on the air shortly with his familiar s.s.b. signal, this will suit John 3AGD. 3AKR and 3AGD attended the Central Western Zone Convention and punished 3HL's rig on the hook-up. Jim 3ABT active on the bands from time to time.

NORTH EASTERN ZONE

Some say no news is good news, but in this case it means no notes except for local doings. It is said that Howard 3YV is now deep in the mystics of colour films. Ken 3KR is still on the sick list. Sid 3CI has been knocking

DO NOT FORGET!

The closing date for copy for the January issue is 3rd December.

over the DX on 10 and 20 mx. George 3GD has found DX too easy to work so is now turning his talents to the higher frequencies. Keith 3JC was heard on 20 mx working LU and other DX. Peter 3APF is not very active because of a 40 db. over S9 power leak. Bruce 3AGG has a log book full of DX, while Brian 3ASF is suffering from the same power leak as Peter. Ray 3FI has got to the stage of thinking in terms of antenna height and the sky hooks that were left at the old QTH. Andy 3FD is still battling on, while Dec 3CO hasn't been contacted, but is believed to be keeping his head above the DX.

Ray 3ZAK has spasmodic bursts of building. Ivan 3ZDI has been spending a few days learning things at the b.b.s.s. (biggest broadcast shortwave station). There, at last, I've got it into the notes; no comment from VK3 please. Vern 3AXW is in his new shack, all that is needed is wall to wall carpet and the XYL will move in too. Frank 3ZU is doing a stirling job every Sunday morning. John 3ACK has been heard talking shop on 20 mx. Come on fellows, lift your heads out of the DX and let's have your news and views.

CENTRAL WESTERN ZONE

The weather turned out fine on 30th September when we held our Annual Convention in Stawell. We were pleased to welcome our visitors who included Leigh 3II, John 3AGD, Kevin 3AKR and Don McLeod from the South Western Zone. Jim 3AOE, Max 3ZCW and Bruce from Hopetoun and Ouyen districts. The tx hunt was keenly fought for and the successful contestant was Don McLeod who was assisted by Keith 3AKP and Bob 3ARM. Chas 3IB operated the hidden tx and I believe he will think twice before he chooses a spot near a lagoon again as the local mosquitoes had a feast before he was located. Kevin 3AKR scored the most points in the scramble so we must congratulate the South Western Zone chaps on their successful day.

Our annual meeting was held in the evening and it resulted in the following office-bearers: President, Byron 3TA; Vice-President, Bob 3ARM; Sec. and Treas., Bill 3AKW. After the meeting, Chas 3IB screened slides which he photographed while on Macquarie Island. They were perfect in every respect and were much enjoyed by all. Also Merv. 3AFO screened some 8 mil. film which he had taken during his holiday in VK8. Again these were excellent and scenes of the wild flowers were all that could be desired.

EASTERN ZONE

Well the long-awaited State Convention is in a few days' time and I hope everyone who is going has notified Ron 3PR and not springing any surprise arrivals. Talking of arrivals, Jack 3AJK and XYL are receiving congratulations on the birth of a daughter, likewise is Gordon 3TH and XYL, also a daughter. Doug 3ADC, formerly of Leongatha, who is in the Navy and has been in the U.K. for the past two years, is back and renewing old friends. Ron 3PR has his antenna down, but has a temporary one in operation; better get it up Ron so the visiting boys can pull it down again, hi! Cliff 3AIT is working plenty of DX on 20 mx, but he does not forget the 80 mx hook-up on Sunday nights, like some people I know.

Gilbert 3AYM is trying out some speech compression, but as yet is not working too good; hope you get things going OK Gilbert. Have not heard Graham 3QZ lately, hope to see you at the Convention, Graham, also a lot of other boys that we don't hear on the air. David 3DY has a new utility so we have not heard much from him lately although he does get around to see the boys and gives them their QSL cards personally. Heard the old man of the mountains, Bill 3WE, on 40 mx and sounds his chirpy old self. Ian 3AAV has his 813 going at last, but don't know that it sounds any better than the 807s although the shack at 3AAV is well illuminated now, wonder why? George 3ZCG is getting his shack nice now, so perhaps his XYL will be able to work in the kitchen without fear of sticking her foot through the 832.

FAR NORTH WESTERN ZONE

An attempt has been made to revive local zone activity on 7 Mc. every Thursday night at 1930 hours, and to date have met with only mild success. What about it fellows, even if only for a short burst. The main item of interest at the moment is keeping in regular contact with Geoff 2AHM at Willow Point, who has been floodbound this last two months. We were pleased to see Ron 3OM and Lynette pay us a visit during their tour through Mildura. Ron's mobile gear was greatly admired and all agreed that it was a masterpiece. 3FC is holding his own with a Type 3, both on 40 and 20 mx; a mighty good signal Frank and don't forget Thursdays. 3TI putting out very nice phone on 40 mx after re-building. 3GZ sneaking in good DX during those odd moments. Glad to see you foresake the key Max and join in with the local rag chewers.

3AJU, all quiet from your locality Bill; how about giving us a break on 40 mx in between working DX on 20 mx? 3AUG migrated from 20 to 40 mx only to meet numerous gremlins; now attempting to stabilise a rock 'n roll v.f.o. 2ZCW doing very good work on 2 mx, rebuilding tx and increasing power. 3AKF installed an all-band final and met with indifferent success; hope to hear more from you after the pi coupler has been completed. 3AFP is busy t.v.i. proofing his tx; let us hear some more of that f.b. signal, Jim. Expecting to hear from 3AWT any day. Associate Fred Uchtman and Chas 3TI will possibly be attending the Convention at Leongatha and are talking of taking mobile gear for the trip. Harry 3MF still too busy to find time for radio. 3TI had a visit from W6PPT and the gang hope to meet up with him before he completes his job in this area.

GEELONG AMATEUR RADIO CLUB

Recently Arch 3BW and his XYL royally entertained members at a recent visit to his QTH. Arch has an aerial farm consisting of 20 mx 3 el. beam, 5 over 5 2 mx beam, plus a cubical quad and vee beams for 15 mx. During the evening a contact was made with W5TJY, but QRM drew a nice contact to a close. The President thanked Arch and XYL for such a friendly evening and excellent supper.

The October tx hunt was in the capable hands of Vic. Clarke and Fred Freeman. The tx was hidden at Leopold and Ted 3AEH won the hunt again. Kevin Nills was in second place. During the day other short hunts were held and Ted was again the winner. Bill 3AWZ is still looking for the tx as this goes to press.

T.v. is all the rage here and Bill 3BU is getting haggard by over indulgence with varied programmes. There will be some cheap gear for sale down here soon if t.v. gets the boys in. No indication of t.v.i. yet either!

The members were fortunate in hearing an excellent lecture by Mr. Brownless on t.v. at a recent meeting. There was a good sprinkling of Amateurs from as far as Colac so the one-eyed monster has the boys in its thrall. See you at the Convention.

MOORABBIN RADIO CLUB

The club's meeting nights are held at the clubrooms, Moorabbin Town Hall, on the first and third Fridays each month. The first Friday is usually just a "natter" night. What you forgot to say on your QSO, you catch up with in person, so to speak!

Friday, 16th Nov., is the annual general meeting when the election of office-bearers for the ensuing year will take place. Final arrangements will be made at this meeting for the annual picnic to be held again at Mornington—this being such a successful location last year. Remember the date, Sunday, 9th December—day after the Olympic finale. Any enquiries contact 3JE, Deputising Sec., or 3XV, Treas. (UW 1472).

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QUEENSLAND

BRISBANE AND DISTRICT

We have some really amazing news this month and as usual it is concerned with t.v. Shortly after TCN became active on Channel 9 in Sydney, Ian 4MO came by a t.v. rx for use in checking what Amateur signals did to the rx. As conditions on the "a.c. bands" were so good, he put up a stacked array on Channel 9, directed on Sydney. One Sunday night he had the "one-eyed monster" on Channel 9 and a picture began to form. At first Ian, who is in the medical profession, was of half a mind to reach for his thermometer to read his temp. and at the same time feel his pulse, when his little daughter arrived on the scene. "What do you see," he asked and, as though it was quite normal to see pictures on the "thing," daughter replied, "I see three ladies dancing." As yet we have no confirmation from Sydney, but are pretty certain Ian has seen the first Interstate reception of t.v. in Australia.

Our second slice of news is more important to prospective Amateurs. We are very pleased to announce that A.O.C.P. classes have again started in Brisbane. Some months ago a par appeared in "QTC" that a morse instructor was wanted in Brisbane and Mrs. 4SA happened to see the item. "That's a job for you, Stan," she said, and after careful thought Stan decided to go one better. Instead of restricting classes to morse he decided to give technical lectures. He made one stipulation, all those taking advantage of the chance to "swot up" for the A.O.C.P. ticket would have to be members of the VK4 Division of the W.I.A. Not only will Stan's mighty nice gesture be a great help to budding Amateurs, but will be a greater help to our Limited A.O.C.P. boys. Please accept the grateful thanks of Council and members of the Division, Stan.

The general meetings are really something to see lately. We thought the wonderful attendance at the meeting when Tibby gave his lecture was interest in t.v. and the problems we could expect when it came to Brisbane, but meetings since then have been very heart-warming and they bring back memories of the early post-war days. Why, only a year ago, we had to reduce the number to constitute a quorum, and now we have packed meetings.

The monthly v.h.f. d.f. hunts have become such a popular affair and so well attended that they now conclude with a barbecue at the location of the hidden tx. One thing we do ask, gentlemen, if any of you can read smoke signals, please don't "home" on the fumes arising from the barbecue fire. A little bird told us that some characters have been getting a lot of d.f. practice in hopes of beating our "d.f. champ.," John 4FP. The short trip to ZL would not be enough to make him lose his "master's touch" and besides, his Jag. can do 120 m.p.h. without any trouble. The barbecue will take a lot of work off the hands of Mrs. 4JO who always put on a nice supper after the hunters returned from the search.

Congratulations to Frank 9FN for the work he did in the rescue of Danny 9TW, on the "Yasme." The operation just goes to show how few stations listen before calling CQ. P.M.G. regulations state that you must listen on your frequency before you make a call, so what about it, gentlemen?

When twenty is open to Europe or America, it is pretty hopeless. A "W" on 15 mx was heard saying he was through with the "rat race" on twenty and was parked on 15 and 10 mx for good. Call CQ on 15 mx when the Europeans are coming in and you usually have more stations replying to you than you can handle. Ten has started to open to Europe and Africa every evening and is open to America almost all day. And yet the "rat race" continues on twenty, keeping it almost useless. The gang is starting to populate fifteen and ten; one point in operating on fifteen and ten, if you don't hear anything on the bands, don't be discouraged, just call CQ and sit back and listen to the calls. While everyone calls CQ on twenty, the fifteen and ten mx bands are usually packed with stations listening and waiting to pounce.

MARYBOROUGH

4CB got his 60 ft. tower up at last, complete with electric motor. With legs set in concrete eight feet under the ground, it should be there for good. Arch is first going to put his 16 el. 2 mx beam on top, and possibly a 4 el. 10 mx beam later. 4AI rarely heard lately. 4BG's windmill tower still on the ground. Ron had a visit from 4HZ who proved with his grid dipper that 4BG's absorption wave meter was wrongly calibrated. 4TF also dropped in while on holidays. 4BG replacing ribbon line to beam with open-wire.

TOWNSVILLE

A very poor attendance was noted at the last monthly meeting, at which opportunity was taken to have a regular ragchew. Various bits and pieces were donated to the club for auction by 4TQ and 4LR. As the Secretary, 4WH, was still in hospital, a club visit was arranged and the regular stalwarts turned up, which cheered Eddie very much. Since then he has had another operation; now totals three, and still unsuccessful. Better get a zipp fastener in Ed. and save a lot of time and pain. All the boys are asking after you in the hook-ups and wishing you a speedy recovery.

Andy 4BW had thousandth QSO with 4ZM on 7 Mc. and now going for the second one. A visitor to writer's shack was Jim 2AKU; after a visit overseas Jim came to sunny North Queensland to top off a glorious vacation. A brief visit to Charters Towers enabled a look-see at Esmund 4GZ and Vern 4LK, but time did not allow a run out to Col 4CE. Vern is putting up 15 el. beam on 144 Mc.; determined, if sunspot activity allows, to work down south. Quite nice to see how the boys co-operated on 14130 Kc. and kept channel open while Danny 9TW was having a hectic time in the Coral Sea. Good work Frank 9FN on arranging rescue operations. Never hear 4SE on the air, must be still after the DX, or maybe has other pressing home chores to do; give me a call sometime! 4EJ trying out new stunt for G4ZU beam. 4RW's dural arrived for same, now finds that coil is being discarded and hairpin stubs in lieu means more dural. 4JH built an electronic keyer and very happy with same, but cannot be persuaded to build a replica.

SOUTH AUSTRALIA

Our September meeting was a gem!! The lecturer being Ross Treharne, 5IQ, who extended himself, giving us the real low-down on radio's newest and smallest development—semiconductors—or transistors to you. Many thanks Ross, your attention to detail, the diagrams, slides, and working exhibits provided many highlights, whilst your typical method of lecturing was enjoyed by all. Ross was ably supported by Ted 5TP. The impact these little wonders are likely to make on our hobby was thus amply demonstrated. All present were privileged to hear the outstanding discourse of the series.

A packed house enjoyed this experience and included visitors Messrs. C. Dorman, T. Kain, J. Sach, Maurie Phillips (5ZU), A. Richmond, J. R. Watts, C. Greaves (G3GTX), D. B. Colbach, J. A. Evans, Reg Whiting (5MZ) and R. (Jimmy) Aabech (LA6CF). Our Norwegian friend, who is /MM at present, was a scorer as a listener in VK-ZL contest so received his certificate personally from President John.

Whilst it was nice to see Reg 5MZ, we regret the circumstances of his visit and hope all is well by the time this is read. Ron 5FY and Burnie 5QW, both from 5WC, deserted the gibbers to pop in to the meeting and see us for a few days. Sitting near the back of the hall was a member in a blue uniform, we will call him VK5SO (S.A.P.) who kept a fatherly eye on us and our behaviour, or perhaps he was watching Doc 5MD who was handling the slides; could be, for the hall lights were dimmed.

General business confirmed acceptance of W. H. John, Burnie Waight (5QW), and R. E. McKenzie (5KN) to full membership, and the following new Associates: J. L. Watts, M. J. Brunger, M. P. Bellmans, J. A. Evans, D. E. Taylor, and F. L. Choate. Congrats. chaps, hope you enjoy your membership with us.

Associate members are reminded of their status in that they are entitled to the full privileges of membership, which includes attending meetings and so on. Don't be shy, come along and enjoy the fellowship which benefits us all. Your representative on the Council, Norm Coltman, is far from shy and he will make you very welcome. If you don't know him look for a "broad" shouldered type with evidence of good feeding, a hearty laugh and with a bundle of "application" papers permanently in his hand, he will take you in hand. Any associates who are eligible for full membership should make application to the Secretary for same, just write in—no forms to fill out for this—and give the details, call sign, etc., and Brian will do the rest.

By the time you read this it is hoped the classes will have started, the delay in doing so being the numbers required not forthcoming previously. It costs the Division about £150 to run the class which must be made up by the course fees, so if you are a possible starter, be in it to get the class under way.

There seems to be a rush for antenna towers these days; John 5KX has just finished his, Gordon 5XU has one to go up and a little bird tells me 5GM has just finished his. Looks like DX is going to get a hiding. Wal 5DF has a new interest, radio controlled model aircraft, fill up her tanks Wal and guide it this way—not a bad idea for a new method of conveying QSL cards, anyway.

RIVER DISTRICTS

A letter to hand from Fred 5MA tells of work undertaken by the gang at Renmark and environs. The river floods there caused such damage that it was feared normal communication would suffer, so they entered into the general emergency organisation and on obtaining a permit from P.M.G., set up gear to operate on the police frequency.

Hughie 5BC, Bob Pearce, and "Hobby" 5RB were involved in setting up gear on the "240" and also getting mobile gear going. Lance 5XL loaned a power supply. These fellows pooled their gear and had an emergency net operative —but fortunately not called upon. It is reported that the undertaking had the blessing of the Commissioner of Police, P.M.G. Department, the local Police, and the local Emergency Committee. Good work, fellows, such community spirit is commendable and will be a lesson to us all for the future. It was proposed that this Amateur net would operate alongside the R.I.T. and Army emergency nets also set up and in use.

SOUTH EASTERN AREA

The last meeting at Mount Gambier found Tom 5TW missing—batching it is believed—go easy on the tin opener, Tom! Claude 5CH not on much these days; he has been on v.h.f. it is understood. Col 5CJ also that way inclined. Stewart 5MS hasn't cleared out all the bugs from his tx yet, but will get around to it soon. Speed it up Stewart, even for you it is thought some of the rare DX could be tempting.

Maybe it is the weather down there that has caused a lapse in activity—more air-conditioned shacks called for—because even Erg 5KU has done little but listening. The sailplane really must be interesting. Get the beam up again Erg and be in it, and make up the DX C.C. number. Leo 5ZAG is speeding up on morse, so we should hear him on the d.c. bands soon, keep it up Leo.

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WESTERN AUSTRALIA

Owing to 6AG's absence from the city, the weekly broadcast was taken, during September, by 6LU and 6RU. Thanks Lou and Jim.

At the last Divisional meeting films were shown, including some technical ones and a very interesting record in colour of 6MK's recent trip to G land. Parts showing views of the Alps were particularly good.

Merv. 3AFO has been staying with his brother-in-law (6EA) and has been doing the rounds of Perth shacks. 2AYE has also been seen around town. He works /MM from the ship when in VK6 waters.

The Contest Committee is very pleased with results of the R.D. Contest. Seven logs were submitted, claiming an average of over 830 points. A record score and also there were a record number of participants. 40 mx scramble results not yet to hand, at the time of writing these notes, but there was a good crowd on and conditions were good.

The bands are getting lively now, 40 and 80 mx producing DX as well as the higher frequencies. Ten mx is also showing more frequent DX openings, OQ5 and Gs having been worked from 6BE. Quite a bit of c.w. on this band, too. Reverting to 40 and 80 mx, Len 6LG has worked two ZSs on phone on the former and one on the latter band, using his half wave 160 mx antenna.

6LU has invested in a c.r.o. and has been making good use of it, resulting in a very nicely modulated signal on 15 mx. 6LT was heard here putting out a very f.b. S7 phone signal whilst he was in the Albany district working portable. 6EJ has had a bit of modulator trouble and is building a new one. Engine trouble too has kept him quiet lately, but he hopes to get things fixed up soon.

A recent listen around the 15 mx band showed the long path to Europe open during the afternoon. It was reported by ZL1CI that W2PEO heard 6EJ peaking S8 during a series of skeds with W7TKB on 80 mx c.w. a few weeks ago.

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TASMANIA

NORTHERN ZONE

Owing to the absence of Ken 7LX who has gone to VK4, the absence of Northern notes have been lacking, however I will endeavour to try and keep them going. Hope the weather is good Ken and the company genial. Ray 7RK is in strife with his power supply, heard that his power main fuses blew out, and investigating the sudden cause found that he had done in his power trannie. How's the new QTH coming on Max? Henry Solomon's XYL has been keeping his nose to the grindstone with re-decorating the interior; hope it won't put him off radio all together.

Had our old friend, Chris. Cullinan, over from VK3 on a spot of leave. During his stay he gave a very fine lecture on t.v. and what have you; most enjoyable Chris., and it was good to meet up with you again. Have two new members up in the North: 7ZCC (George Cransby) is at Bell Bay with the A.A.P.C., and 7MC from VK3. Welcome to you both. Hope to hear you on the air soon George and Bill. Things are too quiet with 7ZAW. What's cooking Perc? It's getting near the warm weather, so what about a signal or two? Our new associate, Charles Spiegler, is still studying hard so we will hear something soon we hope.—H.S.

NORTH WESTERN ZONE

It's good to know that our associates in this zone are receiving the necessary encouragement and help from the full members. A special effort will be made in this column to publicise their doings. After all, we hope they will be future OMs. Associate Max Ives has just started a course with Marconi School for his A.O.C.P. Good luck Max. How about that g.d.o. Max? So accurate you could use it for a freq. meter after the calibrating effort at Jim 7JO's place. Congrats to David Slowan on his engagement some weeks ago. Would 88s be in order? I wonder? Another associate, John Lee, very busy on a rx and a freq. meter. I'd suggest you build your test gear first John, otherwise you'll never finish it properly.

George 7XL very industrious down the low end of the spectrum, with the construction of a tape recorder. I can't remember what the flywheel weighed, and the hole in the middle was full of, but what a lovely piece of white velvet or something it was wrapped in at the office. How's it going, George? 7½ to the bar probably. Ted 7EJ not on the air again yet since R.D. Contest, when he and George 7XL borrowed Jim's 7JO portable for a few contacts. Ted says the trouble is that there is a section of 600 ohm feed line shy between the antenna and the rig.

A visitor from Hobart recently, Edgar 7RY, on holidays, called into see Jim 7JO at Devonport. Nick used to run a beeper in the old days —about 1w. Probably gone to high power now, say 2w. Long time no see Nick! Belated congrats to Bob Wilson on his limited ticket obtained recently. How about a V.h.f. Group in Burnie Bob? Leon 7JP at Queenstown wishes to retain his association with the North Western gang. Pleased to have you Leon. Minibeams and cubical quads seem to be all the rage now, Leon 7JF has one under way and our President, Jim 7JO, has cubical quads in the attic. Whoa! I mean under construction in the attic. Sorry Jim.

Ellis 7WA active on 15 mx. Had a few I calls lined up a few week-ends ago, but liking variety, went after an odd OH or two that happened along. Our Secretary, Sid 7SF, had a fine signal during a Sunday morning hook-up, heard early in October. Keep it going, Sid, or those cobwebs will grow again. The Emu Bay Railway Company has obtained the services of Chas 7CF. When last heard, Chas was considering a portable in the railcar.

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